

Specificații tehnice

Numărul procedurii de achiziție 21044944 din 16 noiembrie 2021
Obiectul achiziției: microscop confocal

Denumirea bunurilor	Denumirea modelului bunului (inclusiv codul din catalogul producătorului)	Țara de origine	Produce-cătorul	Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificarea tehnică deplină propusă de către ofertant	Standarde de referință
1	2	3	4	5	6	7
Microscop confocal	Stellaris 5 LIAchroic	Germania	Leica Microsystems GMBH	Conform cerintelor	Vezi anexa Tehnica	ISO, Declarație de Conformitate

Semnat:_____ Numele, Prenumele: Ceaicovschi Tudor În calitate de: Director general

Ofertantul: „GBG-MLD „ SRL Adresa: mun. Chișinău, str. Albișoara 64/2

Anexa Tehnica

Denumirea bunurilor	Denumirea modelului bunului (inclusiv codul din catalogul producatorului)	Tara de origine	Producatorul	Specificatia tehnica deplina solicitata de catre autoritatea contractanta	Specificatia tehnica deplina propusa de catre ofertant	Referinta catre acte tehnice
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Sistem de microscopie confocala care permite vizualizarea si examinarea preparatelor fixate sau proaspete, histologice, citologice (celule, țesuturi, organe) fixate și marcate fluorescent, pe lame, lamele	Sistem de microscopie confocala Leica Stellaris 5 care permite vizualizarea si examinarea preparatelor fixate sau proaspete, histologice, citologice (celule, țesuturi, organe) fixate și marcate fluorescent, pe lame, lamele	Conform documentelor atasate pagina 1 REF1
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Sistemul trebuie sa asigure eficienta optima de detectie a fluorocromilor si permite separarea semnalelor suprapuse.	Sistemul Stellaris 5 asigura eficienta optima de detectie a fluorocromilor si permite separarea semnalelor suprapuse.	Conform documentelor atasate pagina 1 REF1
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Metode de observare prevăzute:	Metode de observare prevăzute:	
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Microscopie în câmp luminos (cu lumină transmisă) Microscopie cu fluorescență Microscopie confocală.	Microscopie în câmp luminos (Bright field cu lumină transmisă) Microscopie cu fluorescență Microscopie confocală.	Conform documentelor atasate pagina 5 REF2; pagina 6 REF3
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1. Microscop inversat de cercetare;	1. Microscop inversat de cercetare Leica Dmi8 CS;	Conform documentelor atasate pagina 5 REF4

Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2. Sistem confocal de ultimă generație, cu:	2. Sistem confocal de ultimă generație Leica Stellaris 5 LIAchroic, cu:	Conform documentelor atasate pagina 1 REF5
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.1. Unitate laser care sa asigure excitarea fluorocromilor minim cu liniile laser 405,488,561, 638 nm;	2.1. Unitate laser care asigura excitarea fluorocromilor cu liniile laser 405,488,561, 638 nm;	Conform documentelor atasate pagina 5 REF6; pagina 4 REF7, REF8, REF9
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.2. Sistem de scanare care sa asigura scanare punct cu punct pentru o rezolutie axiala optima a imaginilor, viteza de scanare selectabila de catre utilizator in domeniul 1-2600 Hz cu pasi de 1Hz, sistemul de scanare trebuie sa asigure iluminare omogena pe un camp mare de scanare, monitorizare a scanarii pentru asigurarea calitatii imaginii, racire activa a sistemului de scanare, viteza de achizitie de minim 10 cadre/s in format standard 512x512 pixeli si minim 130 cadre/s in format 512x16 pixeli. Rezolutia imaginilor minim 8192 x 8192 or 64 Mpixels, diagonala campului de minim 22 mm (FOV). Mecanism de zoom care sa permita zoom continuu in domeniul 0.75x - 48x;	2.2. Sistem de scanare FOV scanner Stellaris 5 care permite scanare punct cu punct pentru o rezolutie axiala optima a imaginilor, viteza de scanare selectabila de catre utilizator in domeniul 1-2600 Hz cu pasi de 1Hz, sistemul de scanare asigura iluminare omogena pe un camp mare de scanare, monitorizare a scanarii pentru asigurarea calitatii imaginii, racire activa a sistemului de scanare, viteza de achizitie de 10 cadre/s in format standard 512x512 pixeli si 131 cadre/s in format 512x16 pixeli. Rezolutia maxima a imaginilor 8192 x 8192 adica 64 Mpixels, diagonala campului de 22 mm (FOV). Mecanism de zoom care permite zoom continuu in domeniul 0.75x - 48x;	Conform documentelor atasate pagina 2 REF10; pagina 3 REF11

Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.3 Sistem de detectie semnal format din 2 detectori spectrali de tip hybrid care sa asigure fiecare in parte detectia in domeniul spectral 410-850nm cu o rezolutie a selectarii benzii de detectie de 1nm si largime minima a benzii de 5nm. Sistemul de detectie trebuie sa fie astfel conceput incat sa asigure detectia optima a fluorescentei cu pierderi cat mai reduse si o luminozitate egala intre canalele de detectie. Detectorii ofertati trebuie sa asigure o eficienta cantica de minim 58% la 500nm;	2.3 Sistem de detectie semnal format din 2 detectori spectrali de tip hybrid POWER HyD care asigura fiecare in parte detectia in domeniul spectral 410-850 nm cu o rezolutie a selectarii benzii de detectie de 1nm si largime minima a benzii de detectie de 5nm. Sistemul de detectie ofertat este astfel conceput incat sa asigure detectia optima a fluorescentei cu pierderi cat mai reduse si o luminozitate egala intre canalele de detectie. Detectorii ofertati asigura o eficienta cantica de 58% la 500nm;	Conform documentelor atasate pagina 3 REF12
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	3. Software avansat de gestionare a sistemului, de achiziții și analiză imagini;	3. Software avansat de gestionare a sistemului, de achiziții și analiză imagini LAS X Stellaris control software;	Conform documentelor atasate pagina 9 REF13
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	4. Statie de lucru tip PC dedicate sistemului	4. Statie de lucru tip PC HP Z2G4 cu CUDA dedicat sistemului	Conform documentelor atasate pagina 8 REF14
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	5. Accesorii.- masa pentru microscop si masa pentru statia de lucru	5. Accesorii.- masa pentru microscop-Microscope table inversed si masa pentru statia de lucru-Computer table incl. rack	Conform documentelor atasate pagina 7 REF15; pagina 8 REF16
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1. MICROSCOP INVERSAT DE CERCETARE	1. MICROSCOP INVERSAT DE CERCETARE Leica DMI8 CS;	Conform documentelor atasate pagina 5 REF4

Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Microscop inversat, automatizat. Microscopul trebuie sa efectueze automat setarile necesare pentru fiecare metoda de contrast, fara a exista posibilitatea de eroare umana.	Microscop inversat, automatizat Leica DMI8 CS. Microscopul efectueaza automat setarile necesare pentru fiecare metoda de contrast in parte, fara a exista posibilitatea de eroare umana.	Conform documentelor atasate pagina 11 REF17
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.2. Microscop pregatit pentru atașarea sistemului confocal;	Microscop DMI8 CS pregatit pentru atașarea sistemului confocal;	Conform documentelor atasate pagina 5 REF18
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.3. Focusare motorizată, ce se realizează prin mișcarea pe vertical a turelei obiectivelor;	Focusare motorizată cu bucla inchisa, ce se realizează prin mișcarea pe vertical a turelei obiectivelor;	Conform documentelor atasate pagina 6 REF19
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.4. Tub binocular;	Tub binocular ergonomic	Conform documentelor atasate pagina 6 REF20
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.5. Monitorizarea starii microscopului prin display TFT touch screen atasat standului;	Microscopul permite monitorizarea stariilor prin display TFT touch screen atasat standului;	Conform documentelor atasate pagina 12 REF21
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.6. Oculare cu magnificare de 10x și cu câmp vizual de 25 mm;	Oculare HC Plan cu magnificare de 10x și cu câmp vizual de 25 mm;	Conform documentelor atasate pagina 6 REF3
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.7. Stâlp de iluminare diasopică rabatant, prevăzut cu sursă de iluminare LED si suport condensator focusant;	Stâlp de iluminare diasopică rabatant, prevăzut cu sursă de iluminare LED si suport condensator focusant;	Conform documentelor atasate pagina 13 REF22; pagina 14 REF23

Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.8. Turela motorizată, cu o capacitate de montare a 6 filtre de fluorescență;	Turela motorizată, cu o capacitate de montare a 6 filtre de fluorescență;	Conform documentelor atasate pagina 5 REF2
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.9. Condensator motorizat, cu distanța de lucru mare 28mm și apertură numerică de 0,55 pentru câmp luminos;	Condensator motorizat, cu distanța de lucru mare 28mm și apertură numerică de 0,55 pentru câmp luminos;	Conform documentelor atasate pagina 6 REF24
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.10. Masă microscop motorizată, cu domeniu de deplasare pe ambele axe, x și y 127x83mm și viteză de deplasare minim 10mm/s, repositionare cu o precizie mai bună de 1 μm;	Masă microscop motorizată, cu domeniu de deplasare pe ambele axe, x și y 127x83mm și viteză de deplasare minim 10mm/s, repositionare cu o precizie mai bună de 1 μm;	Conform documentelor atasate pagina 6 REF25
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.12. Masa port-probă prezintă sistem de control al deplasării motorizate a probei pe axe xy;	Masa port-probă prezintă sistem de control al deplasării motorizate a probei pe axe xy;	Conform documentelor atasate pagina 7 REF26
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.13. Masa dotată cu adaptor pentru lame de microscopie și pentru plăci de cultură;	Masa dotată cu adaptor pentru lame de microscopie 24-120mm și pentru plăci de cultură cu diametru 24-68mm;	Conform documentelor atasate pagina 7 REF27
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.16. Toate componentele motorizate sunt controlate prin sistemul software, inclusiv revolver, obiective, selector porturi optice, axa de fluorescență, lumina transmisă, obturator, masa port-probă;	Toate componentele motorizate sunt controlate prin sistemul software, inclusiv revolver obiective, selector porturi optice, axa de fluorescență, lumina transmisă, obturator, masa port-probă;	Conform documentelor atasate pagina 9 REF28, REF29

Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.17. Sursă LED pentru iluminare transmisă și pentru fluorescență, cu domeniu de excitație între 390 și 680 nm;	Sursă LED pentru iluminare transmisă și pentru fluorescență, cu domeniu de excitație între 390 și 680 nm;	Conform documentelor atasate pagina 14 REF23; pagina 6 REF30
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.18. Sisteme de filtre pentru fluorescența cu banda îngustă de excitare și supresie FITC/TXR;	Sisteme de filtre pentru fluorescența cu banda îngustă de excitare și supresie FITC/TXR;	Conform documentelor atasate pagina 7 REF31
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	1.19. Cap revolver motorizat pentru 6 obiective și set de 2 obiective (20x cu apertură 0.55 și corectie plan fluotara și respectiv obiectiv 63x sau superior cu apertură minim 1.40 sau superior, corectie plan apocromata, funcționare în imersie ulei)	Cap revolver motorizat pentru 6 obiective și set de 2 obiective 20x cu apertură 0.55 și corectie plan fluotara și respectiv obiectiv 63x cu apertură 1.40 corectie plan apocromata, funcționare în imersie ulei	Conform documentelor atasate pagina 5 REF32; pagina 7 REF33, REF34
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2. SISTEM CONFOCAL	2. SISTEM CONFOCAL Stellaris 5 LIAchroic	Conform documentelor atasate pagina 1 REF5
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.1.1. Unitatea de iluminare Laser, motorizată controlată prin software, nu necesită aliniere sau ajustare automată de focus și a unghiului de incidență al laserului;	Unitatea de iluminare Laser, motorizată controlată prin software, nu necesită aliniere sau ajustare automată de focus și a unghiului de incidență al laserului;	Conform documentelor atasate pagina 1 REF5; pagina 2 REF35
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.1.2. Sistemul oferit este compus din laser UV cu lungimea de undă 405nm și laseri tip diode /DPSS sau Solid state care asigură excitare la lungimile de undă 488, 561, 638 nm;	Sistemul oferit este compus din laser UV cu lungimea de undă 405nm și laseri tip diode /DPSS sau Solid state care asigură excitare la lungimile de undă 488, 561, 638 nm;	Conform documentelor atasate pagina 5 REF6; pagina 4 REF7, REF8, REF9

Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.2. Sistem de scanare	Sistem de scanare FOV scanner Stellaris 5	Conform documentelor atasate pagina 2 REF10
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.2.1. Sistemul confocal permite scanarea de tip galvano (non-rezonant) sistem care asigura o înaltă rezoluție până la 8192x8192 pixeli și cu viteză mare de vizualizare minim 10 cadre/secunda în format standard 512x512 pixeli;	Sistemul confocal permite scanarea de tip galvano (non-rezonant) sistem care asigura o înaltă rezoluție până la 8192x8192 pixeli și cu viteză mare de vizualizare minim 10 cadre/secunda în format standard 512x512 pixeli;	Conform documentelor atasate pagina 2 REF10
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.2.2. Sistemul de scanare permite conectarea LASER-ilor de excitare, conectarea a până la 5 detectori spectrali și a unui detector diasopic BF detector, sau echivalent, cu asigurarea cerințelor de performanță solicitate	Sistemul de scanare permite conectarea LASER-ilor de excitare, conectarea a până la 5 detectori spectrali și a unui detector diasopic BF detector	Conform documentelor atasate pagina 2 REF10
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.2.3. Achiziția de imagine prin scanare de tip galvano se realizează la o rezoluție maximă de 8192x8192 pixeli, 64 Mpxl;	Achiziția de imagine prin scanare de tip galvano se realizează la o rezoluție maximă de 8192x8192 pixeli, 64 Mpxl;	Conform documentelor atasate pagina 3 REF11
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.2.4. Asigura câmp de scanare mare (diagonala în plan intermediar de 22 mm);	Asigura câmp de scanare mare diagonala în plan intermediar de 22 mm;	Conform documentelor atasate pagina 3 REF11
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Zoom de scanare ajustabil în domeniul 0.75-48x;	Zoom de scanare ajustabil continuu în domeniul 0.75-48x;	Conform documentelor atasate pagina 3 REF11

Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Moduri de scanare: liniar, bidimensional, tridimensional, temporal;l	Moduri de scanare: liniar, bidimensional, tridimensional, temporal (xyz,xt,xyt,xyz.....)	Conform documentelor atasate pagina 18 REF36
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.3. Detectori (modulul de detecție)	Detectori 2x Power Hyd S (modulul de detecție)	Conform documentelor atasate pagina 1 REF37
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	2.3.1. Modul de detectie format din 2 detectori SPECTRALI care ofera detectie spectrala a semnalelor de fluorescenta in domeniul 410 -850 nm, nu necesita filtre, banda de detectie fiind reglabila cu precizie de 1nm, largime minima a benzii de detectie de 5nm si largime maxima de 440nm, posibilitatea de setare valoare de gain individuala pentru fiecare detector in parte, senzitivitate ridicata (eficienta quantica minim 60.2% la 450nm si 58.7% la 500nm);	Modul de detectie format din 2 detectori SPECTRALI care ofera detectie spectrala a semnalelor de fluorescenta in domeniul 410 -850 nm, nu necesita filtre, banda de detectie fiind reglabila cu precizie de 1nm, largime minima a benzii de detectie de 5nm si largime maxima de (850-410=440nm), posibilitatea de setare valoare de gain individuala pentru fiecare detector in parte, senzitivitate ridicata (eficienta quantica minim 60.2% la 450nm si 58.7% la 500nm);	Conform documentelor atasate pagina 1 REF37; pagina 3 REF38; pagina 9 REF39; pagina 18 REF40; pagina 23 REF41
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	3. SOFTWARE AVANSAT DE ACHIZIȚIE ȘI ANALIZA IMAGINI	SOFTWARE AVANSAT DE ACHIZIȚIE ȘI ANALIZA IMAGINI LAS X Stellaris control software	Conform documentelor atasate pagina 9 REF13

Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	3.1. Software de ultimă generație pentru cercetare avansată, care asigura controlul componentelor motorizate ale microscopului dar si al sistemelor de detectie și captură de imagini, recunoaste și diferentiaza zgomotul de imagine;	Software de ultimă generație pentru cercetare avansată, care asigura controlul componentelor motorizate ale microscopului dar si al sistemelor de detectie și captură de imagini, recunoaste și diferentiaza zgomotul de imagine;	Conform documentelor atasate pagina 9 REF28, REF29
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Modul software pentru achizitie automata de date in super-rezolutie (rezolutie spatia de minim 120nm)	Modul software LIGHTNING pentru achizitie automata de date in super-rezolutie (rezolutie spatia de minim 120nm)	Conform documentelor atasate pagina 9 REF42
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Permite functionarea unitară a întregului ansamblu pentru toate tipurile de microscopie (transmisă, fluorescentă, confocală);	Permite functionarea unitară a întregului ansamblu pentru toate tipurile de microscopie (transmisă, fluorescentă, confocală);	Conform documentelor atasate pagina 9 REF13, REF28, REF29
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	4. STATIE DE LUCRU	4. STATIE DE LUCRU HP Z2G4	Conform documentelor atasate pagina 8 REF14
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	4.1. Stație de lucru PC cu placa grafica CUDA dedicată sistemului de microscopie,	Stație de lucru PC cu placa grafica CUDA dedicată sistemului de microscopie,	Conform documentelor atasate pagina 8 REF14

Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Computer tip Workstation de ultimă generație, de mare viteză, cu componente de procesare grafică de ultimă generație cu memorie grafică de 8GB tip GDDR6 și capacitate mare de stocare a datelor, adaptat necesităților de funcționare integrată a sistemului și a imaginilor rezultate din experimentele de super-rezoluție;	Computer tip Workstation de ultimă generație, de mare viteză, cu componente de procesare grafică de ultimă generație cu memorie grafică de 8GB tip GDDR6 și capacitate mare de stocare a datelor, adaptat necesităților de funcționare integrată a sistemului și a imaginilor rezultate din experimentele de super-rezoluție;	Conform documentelor atasate pagina 8 REF43
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Configurație minimă: sistem de operare Windows 10 IoT Enterprise procesor Intel Core I5-8500,	Configurație minimă: sistem de operare Windows 10 IoT Enterprise procesor Intel Core I5-8500,	Conform documentelor atasate pagina 8 REF43
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	32 GB RAM,	32 GB RAM,	Conform documentelor atasate pagina 8 REF43
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	SATA SSD 256 GB pentru sistemul de operare	SATA SSD 256 GB pentru sistemul de operare	Conform documentelor atasate pagina 8 REF43
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	SSD 512GB pentru stocare temporară de date HDD de 4TB	SSD 512GB pentru stocare temporară de date HDD de 4TB	Conform documentelor atasate pagina 8 REF43
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	placă video cu memorie grafică de 8GB tip GDDR6 bus memorie minim 256 biți, bandă de transmisie minim 416 GB/s cu minim 3 ieșiri de tip display port și o ieșire de tip USB tip C	placă video cu memorie grafică de 8GB tip GDDR6 bus memorie minim 256 biți, bandă de transmisie minim 416 GB/s cu minim 3 ieșiri de tip display port și o ieșire de tip USB tip C	Conform documentelor atasate pagina 8 REF43

Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	5. ACCESORII	5. ACCESORII	
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Masa microscop – Masa cu amortizare pasiva a vibratiilor pentru microscopae inversate, cu locasuri pentru piciorusele microscopului.	Masa microscop – Masa cu amortizare pasiva a vibratiilor pentru microscopae inversate, cu locasuri pentru piciorusele microscopului.	Conform documentelor atasate pagina 7 REF15
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Masa pentru statia de lucru specifică sistemului propus	Masa pentru statia de lucru specifică sistemului propus	Conform documentelor atasate pagina 8 REF16
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Declarația UE de conformitate Certificatul CE	Declarația UE de conformitate Certificatul CE	Conform documentelor atasate pagina 24
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Termen de garanție – nu mai puțin de 12 luni;	Termen de garanție – 12 luni;	
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Servicii postgaranție – nu mai puțin de 24 luni;	Servicii postgaranție – 24 luni;	
Microscop confocal	Microscop confocal Leica Stellaris5 LIAchroic	Germania	Leica Microsystems GMBH	Obligatoriu operatorul economic va asigura instruirea personalului din cadrul USMF "Nicolae Testemițanu" privind utilizarea și deservirea microscopului.	Vom asigura instruirea personalului din cadrul USMF "Nicolae Testemițanu" privind utilizarea și deservirea microscopului.	

QUOTATION DZ1918B

Date

2 / Nov / 2021

Item	Description	Qty	List Price EUR	Total EUR
STELLARIS				
	- STELLARIS 5 LIAchroic - DMi8 CS - Binocular Tube - Closed Loop Focus - LED3 - Filter Cube FITC/TXR - Scanning Stage DMi8 - Universal sample holder - RGB - Laser 405 DMOD - FOV Scanner STELLARIS 5 - Scan Optics without Rotation - 2 internal detection channels equipped with Power HyD S - CUDA Workstation - Microscope Table passive - Computer Table - 230V Power Hybrid Detector HyD S: The new standard for detection. All-round detector, high performance throughout the spectrum, two times increased photon detection efficiency in the blue-green range compared to standard multialkaline photomultiplier. Leica Si-based technology. Compatible with TauSense technology in combination with the white light laser.			

REF37

STELLARIS Scanhead

100	STELLARIS 5 LIAchroic STELLARIS 5 LIAchroic is a confocal point scanning system with LIAchroic beam splitters. It includes a highly sensitive, prism-based spectral detection design with computer controlled adjustable bandwidth for all fluorescence channels. Up to 2 different laser ports are available, dependent on the configuration, for incoupling of 405 nm and visible lasers. In combination with the new Power HyD S detectors STELLARIS 5 LIAchroic offers maximized detection efficiency for all commonly available fluorophores and allows the application and separation of multiple spectrally overlapping marker, up to five simultaneously. The combination of Field-of-View (FOV) or Tandem scanner (optional) with Dynamic Signal Enhancement and LIGHTNING delivers superb image quality at full speed and in super-resolution. STELLARIS 5 LIAchroic laser supply unit • Up to 6 single laser lines (405, 448, 488, 514, 561, 638 nm) Supports extensions for:	1		
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REF1

REF5

Item	Description	Qty	List Price EUR	Total EUR
REF35	• DLS - Digital Light Sheet Microscopy Supports the fluorifier discs with numerous options for: • Polarization selective imaging • Optional notch filters for additional reflection suppression Other features are: • Support for optional bright field detector • Single square detection pinhole for maximal optical resolution • Automatic optimization of the pinhole diameter, wavelength- dependent automatic mode available • Internal scanner controlled via FPGA (Field programmable gate arrays) • Multidimensional image acquisition in x, y, z (space dimension) and t (time), lambda (wavelength) and any combination thereof • Supports optional z-galvanometer or z-piezo stage for real-time cross-sections • ROI (region of interest) scan with arbitrary geometry independent for each laser line • Sequential Scanning for cross-talk free multi-color imaging (stack-wise, frame- wise or line-wise) • Beam parking for local fluorescence photobleaching, laser ablation or (optional) fluorescence correlation spectroscopy • Programmable control panel for efficient fast control of all relevant system parameters No : 158101101	1		
200	LIAchroics RGB LIAchroic beam splitter for STELLARIS 5 LIAchroic (158101101). The beam splitters have been custom designed and produced by Leica and thus provide excellent image contrast with optimal transmission up to 850 nm. The beam splitters have the following properties: - Low incident angle for best transmission independent of polarization of fluorescence light - Neutral beam splitter with splitting ratio of 15/85 - LIAchroic beam splitter for 638 / 561 / 488 - Support for laser combination Red/Green/Blue System requirements: - STELLARIS 5 LIAchroic (158101101) No : 158209433	1		
300	FOV Scanner STELLARIS 5 Field-of-View scanning system for STELLARIS 5. Highest axial resolution with galvanometric scanner: 5 confocal and fully multi-spectral channels along with transmission light detection, simultaneously. True optical sections by point scanning, compatible with AOBs® and SP® detection. - True confocal point scanner for highest axial image resolution - User adjustable speed 1 - 2600 Hz in steps of 1 Hz - X2Y-Scanner design for homogeneous illumination in a largest field of	1		
REF10				

Item	Description	Qty	List Price EUR	Total EUR
REF11	view -Feedback monitoring of the scanner for constant image quality -Actively cooled scanner -Switch between linearized and sinusoidal x-scan -Linearized scanner movement with constant, very long pixel dwell time and short duty cycle (< 15%) to ensure for a steady illumination time per pixel -Up to 10 frames / second , 512 x 512 -Up to 131 frames / second , 512 x 16 -Max. Image resolution 8192 x 8192 or 64 Mpixels -Line frequency up to 5200 Lines / second -Very large scanfield with 22 mm (FOV) diagonal in the intermediate image plane -Hardware zoom, stepless 0.75x - 48x -Optical scan field rotation: 200° (Koenig-Rotator), optional No : 158101130			
	400 Scan optics HIVISR DMi8 The scan optics module contains the complete scan optics for STELLARIS 5 or STELLARIS STED on DMi8 stands with the following features: -Optical coating HIVISR with high transmission of > 99% throughout the visible spectrum ranging from 400-850 nm -Low reflection at optical surfaces throughout the visible spectrum -Prepared for either an FOV or a tandem scanner with Leica's parallax-free three-mirror design -Prepared for excitation with 405 nm cw or pulsed laser, all cw lasers emitting visible light and white light laser No : 158101121	1		
REF12	500 Power HyD S 2ch SP Core Unit STELLARIS Spectral Detection (SP) core unit including 2 Power HyD S detectors. The main features are: • Up to five fully tunable spectral detection channels • Maximal fluorescence detection because of unique prism design • Detection range 410-880 nm. Spectral tuning resolution 1 nm. Minimal detection range 5 nm. • Equal brightness between channels due to very efficient W-shaped slit design • Permits excitation scans as well as excitation-emission ("lambda-square") scans for confocal spectroscopy applications Power Hybrid Detector HyD S: The new standard for detection. All-round detector, high performance throughout the spectrum, two times increased photon detection efficiency in the blue-green range compared to standard multi-alkaline photomultiplier. Leica Si-based technology. • Typical photon detection efficiency > 58% @ 500nm. • Multi-pixel silicon photo-multiplier array. • Extended dynamic range for maximal contrast and flexibility • Analog, reflection and photon counting detection modes • Power counting: 0,1,2 (double) photons can be identified • TauSense capabilities (requires a pulsed laser source): TauGating	1		

REF38

Item	Description	Qty	List Price EUR	Total EUR
	(up to 2 tunable timegates, simultaneously). TauContrast (mean photon arrival time). TauSeparation (lifetime based component separation).			
	No : 158101312			
600	SP Light Trap Housing for protection against reflections and dust from SP channels without detector. This position can be equipped with an additional confocal detector as part of an upgrade. No : 158201310	3		
700	STELLARIS 5 DMI8 adapter Mechanical part essential for STELLARIS 5 scan head on DMI8 stand No : 158101140	1		

VIS and UV Laser Diodes

800 REF7	Laser 488nm (Blue) Solid state laser "Blue" 488 nm cw Laser intensity is modulated via acousto-optical tunable filter (AOTF) Specifications: - Wavelength 488±1 nm - 20 mW output power - Laser class IIIb No : 158202112	1		
900 REF8	Laser 561nm (Green) DPSS laser "Green" 561 nm cw Laser intensity is modulated via acousto-optical tunable filter (AOTF) Specifications: - Wavelength 561±1 nm - 20 mW output power - Laser class IIIb No : 158202114	1		
1000 REF9	Laser 638nm (Red) Laser diode "Red" 638 nm cw Laser intensity is modulated via acousto-optical tunable filter (AOTF) Specifications: - Wavelength 638 +2/-1 nm - 30 mW output power - Laser class IIIb No : 158202115	1		

Item	Description	Qty	List Price EUR	Total EUR
1100 REF6	Laser 405 DMOD Laser Diode with wavelength 405 nm cw for fluorescence imaging with dyes such as DAPI or Hoechst. Laser intensity is directly modulated (DMOD), suitable for imaging with region of interest (ROI), in detail. - Wavelength 405±3 nm - Laser output power 50 mW - Direct modulation of laser intensity (DMOD) - Suitable for imaging and photoactivation System requirements: - Laser Port 405 nm - CS2 objective lens for optimal multi color imaging No : 158202140	1		
1200	Laser Port 405 Optical and mechanical coupling interface for laser with continuous wave 405 nm -Laser coupling via fiber, beam merging by specific longpass-dichroic LP 425 -Unified collimation optics compatible with CS2 design HC PL APO objective lenses -Chromatic correction for optimal multi-color imaging -Streamlined optical design for all magnifications for reduced maintenance cost -UV collimator automated by software Simultaneous configuration of UV and VIS lasers is possible due to 2 independent laser ports in scan head. No : 158101200	1		

Microscope Stand

1300 REF18	DMi8 CS Inverted research microscope based on the DMi8 series, with motorized nosepiece and closed loop. Prepared for confocal imaging.	1		
REF2	-motorized fluorescence turret with 6 positions for filter cube and motorized shutter -suitable for lenses with magnifications from 1.25x to 100x -Microscope controller CTR Box Advanced -SmartMove for easy control in xy and z -Fluorescence Intensity Manager (FIM) -All microscope parameters are displayed on the LCD -Quick switching from coarse to fine drive			
REF32	-Motorized 6x nosepiece -Camera port (prepared) on the right side -additional Infinity Port on the right side -nosepiece with cooling system			

Item	Description	Qty	List Price EUR	Total EUR
REF24	-spill protection for motorized nosepieces on DMI8 with sealing ring and collecting container -condenser S1/S28 -condenser head S28/0.55			
REF3	-Optical equipment for with brightfield light source prepared for confocal microscopy -eyepieces HC PLAN 10/25 BR M -connection for lamp house, straight for DMI -Immersion oil F -Accessories and holder for confocal scanner -Laser safety equipment No : 155933662			
1400	Transmission axis Motorized transmission axis (without DLS) for optional photomultiplier allowing TLD (software controlled) No : 155933666	1		
1500 REF20	Bino Tube Binocular ergo tube for research microscope DMI8 CS inverted No : 155933660	1		
1600 REF19	Closed Loop Focus Motorized focus drive for DMI8 with additional closed loop feedback for highest precision positioning. No : 158204201	1		
1700 REF30	Leica LED 3 LED3 is a mercury-free, bright, and versatile solid-state light source offering white light in the 390-680nm range and is well suited for a range of fluorescence microscopy and stereo microscopy applications. LED3 is practically maintenance-free and offers better output stability and longer life time of the lamp than traditional metal-halide lamps. LED3 can be triggered to synchronize illumination with camera exposure and minimize photobleaching. The LED3 Bundle contains: 1x LED 3 light source, 1x 3mm Liquid-Light-Guide, 1x 24V DC 220W Power Supply, 1x 2mm Hex Allen Wrench, 1x BNC-to-SMB Cable, 1x Adapter plug BNC-to-SMB No : 158000677	1		
1800 REF25	Scanning stage inv. universal Motorised Scanningstage for DMI8 and DMI 6000 Travel range: 127 x 83mm Spindle pitch: 1mm Speed: 10mm/sec Resolution: 0,02-0,04µm Reproducibility: < 1µm Accuracy: +/- 3µm The SuperZ Galvo stage has to be ordered separately. It is not included in the order number 158004141. No : 158004141	1		
1900	Cable Scanning Stage, 3 m, 90° Extension cable for Scanning stages which are operated by CTR 6500. Length 3m, 90° angled Suitable for 156504150 Scanning stage upright 156504141 Scanning Stage inv. Universal 156504150 Scanning stage	1		

Item	Description	Qty	List Price EUR	Total EUR
	upright 156504163 Scanning Stage CFS flat No : 15500332			
2000	XY advanced board for scanning stage REF26 No : 15525226	1		
2100	Univ.hold.frame K:0311.200 Universal Mounting frame invers	1		
REF27	Frame to fix different cultivation vessels (petri dishes with 24-68 mm diameter) and glass slides (with 24-120 mm length) with two moveable brackets with a variable clamping range. Outer dimension: 160x110 mm. No : 15600234			
2200 REF31	Filter cube FITC/TXR Filter cube DAPI/FI, size P Excitation: 395/30, 485/25 Dichroic: 418, 502 Emission: 442/35, 525/40 No : 15525319	1		
2300 REF15	Microscope table Inverse, passive Microscope table with passive vibration dampening system for inverted microscopes Leica DMI8 with Leica STELLARIS consisting of: - Granite top with fittings for microscope stand passive damped against vibrations and surrounded by wooden frame - Solid steel frame made of square tube with finish - Width 900mm, Depth (including cable duct) 1.000mm, Hight 770mm No : 158204704	1		

Objectives for Microscope

2400	Obj. HC PL FLUOTAR 20x/0.55 REF33 No : 15506519	1		
2500	Obj. HC PL APO 63x/1.40 OIL CS2 Fits SP8, STELLARIS 5, STELLARIS STED and STELLARIS 8. REF34 Plan apochromat oil immersion objective with superior color correction, optimized for confocal scanning applications. Free working distance: 0.14 mm. No : 15506350	1		
2600	Type F Immersion liquid, ISO 8036 10ML IMMERSION OILNON-FLUORESCING No : 15513859	1		

Item	Description	Qty	List Price EUR	Total EUR
Software and Workstation				
2700	High brilliance monitor - Display size (diagonal): 95 cm (37,5 inch) - Resolution (native): 4K-Wide 3840 x 1600 @ 60 Hz - Contrast ratio: 1000:1 static, 5000000:1 dynamic - Display: IPS with LED-Backlight - Angle: 178° horizontal, 178° vertical - Proportion: 21:9 - Display range (metric): 87,97 x 36,65 cm - Brightness: 300 cd/m² - Type of display input: 1 DisplayPort, 1 HDMI, 1 USB Type-C - Point spacing: 0,229 mm - Reaction time: 5 ms grey to grey No : 158003150	1		
2800 REF14	Workstation Entry level workstation HP Z2G4 with CUDA support for basic workloads. Cannot be combined with advanced imaging modalities (DIVE, DLS, FALCON, STED). Basic performance of Navigator and Lightning, good performance of Dynamic Signal Enhancement.	1		
REF43	- Intel Core i5-8500 processor (6 cores / 6 threads). - 32 GB working memory. - Nvidia Quadro RTX 4000 graphics card with 8 GB graphic card memory and 2304 CUDA cores. - fast 256 GB SATA SSD system drive (Windows, LAS X), very fast 512 GB M.2 SSD hard drive for temporary storage of data (transient data container of LAS X, not for the user) and normal 4 TB HDD drive for storage of data. - Intel I350-T2 network adapter. - HP 9.5mm Slim SuperMulti DVD writer. - Windows 10 IoT Enterprise LTSC 2019. - Keyboard, mouse and mouse pad. The specifications of the PC may change due to technical innovations. No : 158203110			
2900 REF16	Computer Table incl. Rack Computer table for computer screen, input devices and controllers for Leica STELLARIS, consisting of:	1		
	- Desktop made of multiplex wood with decor - Solid steel frame made of square tube with finish - Width 1.500mm, Depth (including cable duct) 1.000mm, Hight 770mm			

Item	Description	Qty	List Price EUR	Total EUR
3000	- Includes storage rack for microscope electronics and accessories No : 158204700 LAS X STELLARIS Control Software Essential software for all STELLARIS confocal systems for hardware control, acquisition, processing, quantification and easy export of data. Includes hardware dongle, installation DVD, hardware manual and access to online manual. It can be extended with additional software licenses. Core software functionalities: • Image Compass: Simplistic user interface, even for complex experiments. Set up of multicolor experiment with one click per fluorophore. Maximal signal yield through optimal acquisition settings selected automatically. Multidimensional acquisition, full control of motorized hardware. GUI optimized for dark rooms and image processing. • TauSense: Instant access to average arrival time and intensity information (TauContrast). Differentiate between desired and unwanted fluorescence signal (TauGating, GateScan). Separate fluorophores using lifetime-based information (TauSeparation, TauScan). • Dynamic Signal Enhancement: Preserving temporal resolution while maintaining an optimal signal-to-noise ratio. • LIGHTNING: LIGHTNING basic detection package (without 'LAS X LIGHTNING Expert'). o Super-resolution down to 120 nm in x and y, 200 nm in z. o Wizard for online data acquisition. o Fully automated "One-Click" functionality. o Additional detection strategies for Low SNR & High SNR. o Adaptive image quality determination and adaptive reconstruction in automatic mode. o Elimination of border effects. o 2D reconstruction. o Time series. o Channel-independent image reconstruction. o High-performance GPU-based processing. • Navigator: Navigator basic package (including 'LAS X Stitching' and 'LAS X Mark & Find'). o Spiral scan to easily generate an overview of your specimen. o Overview images of any shape can be generated with a user defined region. o Includes a choice of predefined sample carrier formats such as slides, petri dishes, chambered slides and well plates from different suppliers. o Images can be added to the overview regardless of magnification, camera, detector or contrasting method used. o Regions and positions can be defined for high resolution scans and multi-well plates. • Lambda scan: Acquisition of emission spectrum using spectral detectors. Acquisition of excitation spectrum using white light laser. • Lambda-lambda scan: Acquisition of full excitation-emission spectrum. • Z intensity compensation: Laser power and/or detector gain adjustments within z-stacks. No : 158203200	1		

2. Intended Purpose of the Microscope

DMi8 Leica microscopes are inverted light microscopes and are intended for use as general lab microscopes for routine examinations of biological specimens.

Directions for use:

Inspection, numbers, classification, identification and monitoring of cell and tissue cultures, examining biological specimens, liquids and sediments that lead to information relating to physiological and/or pathological states, inborn anomalies and the monitoring of therapeutic measures.

The resulting measures are based on the interpretation of the medical professional.

Contraindications:

Not suitable for testing potentially infectious specimens.

REF17

The Leica DMi8 series can be used universally. All contrast methods, such as Brightfield, Darkfield, Phase Contrast, DIC, fluorescence or modulation contrast, are integral components of the microscope and can be adapted or exchanged quickly and easily. Variable illumination and imaging beam paths as well as HCSoptics, modular accessories and a wider range of available peripherals supplement the inverted Leica research stand from Leica Microsystems CMS GmbH.

Leica DMi8 microscopes:

Leica DMi8 manual	11889010
Leica DMi8 coded	11889011
Leica DMi8 automated	11889012
Leica DMi8 automated	11889013

IVD

The above-named microscopes comply with *EU Directive 98/79/EC* concerning in vitro diagnostics.

Simultaneously, the requirements in *EU Directives 2006/95/EC* and *2014/35/EU regarding the safety of electrical equipment*, the *EU Directives 2004/108/EC* and *2014/30/EU regarding electromagnetic compatibility*, and the requirements in *Machinery Directive 2006/42/EC* have been taken into account and met for the DMi8 series microscopes.

Reasonably foreseeable misuse

The following are prohibited:

- To use the microscope for any purpose not in accordance with the Declaration of Conformity (e.g. the use of medical products in accordance with *EU Directive 93/42/EEC*)
- Making use of auxiliary equipment to use the area between the microscope stage and objectives as a clamp or holder (working like a vice)
- Operating the microscope in an inclined position
- Cleaning the microscope in a way other than specified in the manual
- Modifying the built-in safety circuits in the instrument
- Allowing unauthorized personnel to open the instrument
- Using cables that Leica Microsystems CMS GmbH has not provided or permitted
- Using the swiveling Touch Screen of the microscope as a transport handle
- Using combinations with non-Leica components that go beyond the scope of the manual

4. OVERVIEW OF THE INSTRUMENT

4.4.1 Control panel fields

Control panel field on the left microscope side

- 1 Motorized aperture diaphragm adjustment
- 2 Motorized illuminated field diaphragm adjustment
- 3 Motorized toggling between the TL/Fluor illumination axes

- 4 Adjusting the Transmitted Light brightness of the intensity levels for the automated FIM (fluorescence intensity manager)

An LED indicates the illumination method which is currently affected by the brightness adjustment.

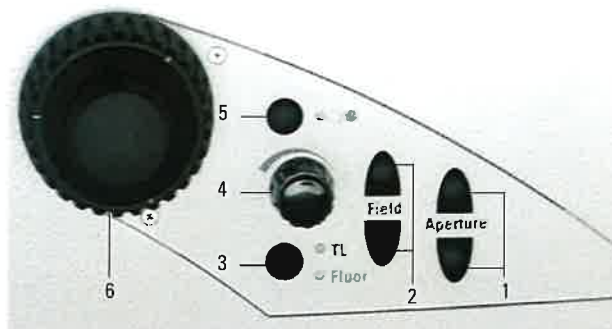
- 5 Opening/closing the motorized shutter or during manual shutter light control

An LED displays the state of the shutter:

LED on = shutter opened

LED off = shutter closed.

- 6 Focusing



Maximum system design of the left control panel field
The number of buttons may vary depending on the configuration.

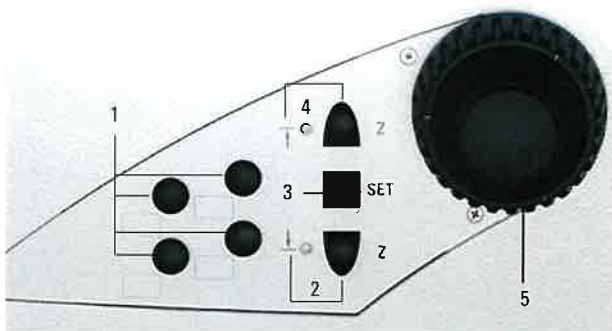
Control panel field on the right microscope side

- 1 Variable function keys (freely configurable)

The function keys are preassigned at the factory (see "Identification Sheet" and S. 92)

- 2 Focus threshold (the LED illuminates when the focus threshold is set)
- 3 Setting the focus position and focus threshold
- 4 Focus position (the LED illuminates when the focus position is set)

- 5 Focusing



Maximum system design of the right control panel field
The number of buttons may vary depending on the configuration.

Control panel fields on the front side

Swiveling Touch Screen for adjusting all automated components on the Leica DMI8. **REF21**

Adjustable angle for better readability.

Refer also to the chapter titled "The Touch Screen" S. 34

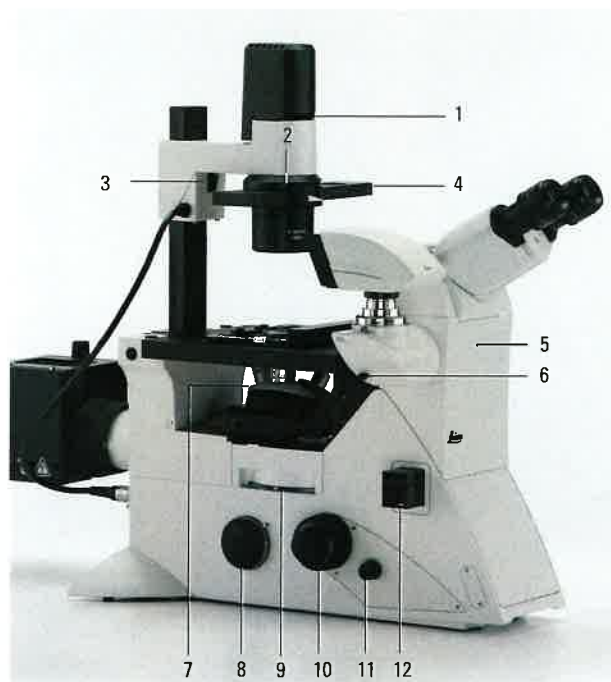


4. OVERVIEW OF THE INSTRUMENT

4.4.2 Additional control elements

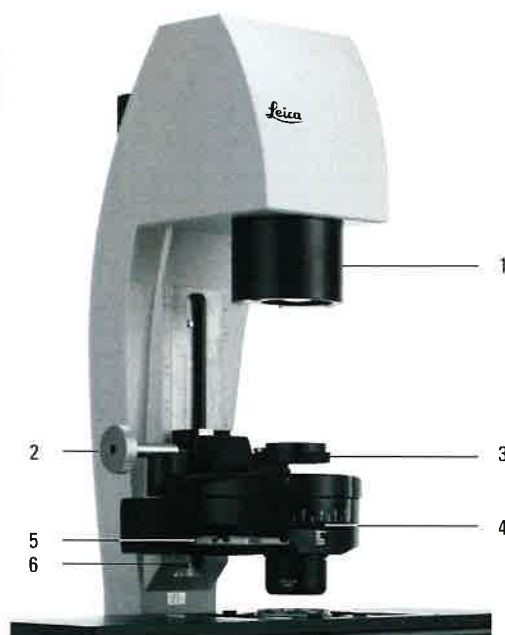
Left side of the Leica DMi8 with a fixed Transmitted Light arm

- 1 Filter receptacle
- 2 Aperture Diaphragm Adjustment
- 3 Stop lever for condenser height adjustment
- 4 IMC or light ring slide
- 5 Bertrand lens centering
- 6 Toggling the top port and Bertrand lens
- 7 Manual objective change
- 8 Left side port
- 9 Manual filter change
- 10 Focusing
- 11 Brightness adjustment
- 12 IMC module



Left side of the Leica DMi8 with a tiltable Transmitted Light arm **REF22**

- 1 Illuminated field diaphragm adjustment (motorized or manual)
- 2 Condenser height adjuster
- 3 Swinging in the polarizer
- 4 Aperture Diaphragm Adjustment
- 5 Condenser setting
- 6 Condenser height stop

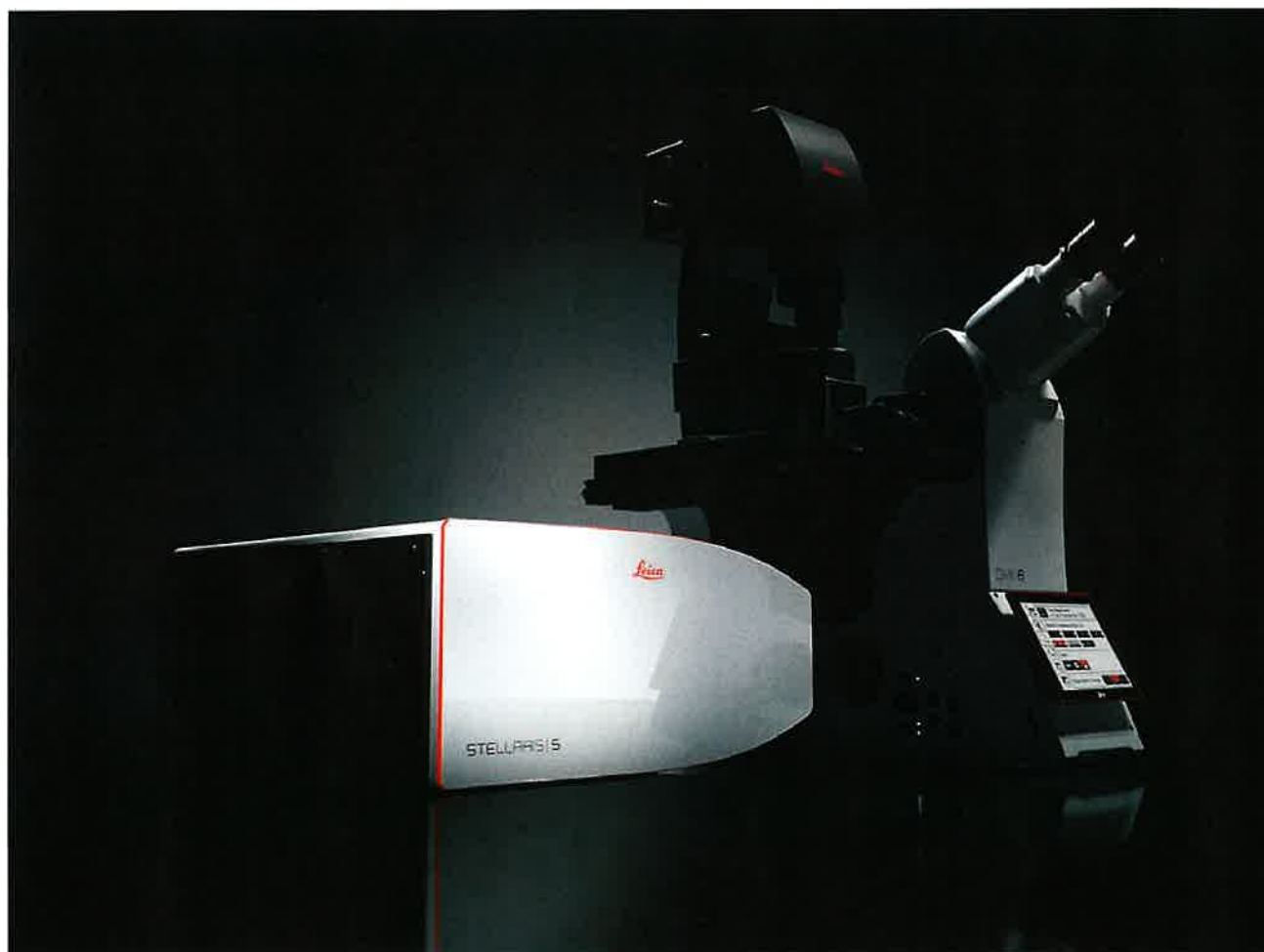


REF23

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STELLARIS 5

Technical Documentation | 07.2020



SPECIFICATIONS

MICROSCOPES	Microscope stand	Options
	Upright	DM6 CS DM6CFS
	Inverted	DMI8 CS DMI8 CS Premium
VIBRATION ISOLATION	Isolation options	Specifications
	Anti-vibration table	Yes (active/passive)
MICROSCOPE FOCUS	Focus options	Specifications
	Autofocus	Optional reflection-based Adaptive Focus Control (AFC) for Leica DMI8 CS with 15 Hz sampling rate Image Based Autofocus for transmission light and fluorescence images. Can be combined with AFC
	Motorfocus	Travel range depending on mechanics of microscope/minimum step size 50 nm, adjustable in increments of < 4 nm (z-wide)
	Closed loop focus	Repeatability < 20 nm without hysteresis
	Z galvanometer	Selectable z modes (Galvo Flow/discrete steps) available, 1500 µm range. Minimum step size 20 nm; adjustable in increments < 1.5 nm. Unique xzy scan mode for real-time xz slices, for setup of correction collar and for quick assessment of axial resolution (superZ)
	Z piezo stage	500 µm range. Minimum step size 5 nm. Scan mode xzy for real-time xz slices, for setup of correction collar and for quick assessment of axial resolution
CONTINUOUS WAVE LASERS	Laser type	Specifications
	VIS 405	Diode laser 50 mW: 405 nm
	VIS	Diode laser 40 mW: 448 nm
		Solid state laser 20 mW: 488 nm
		Solid state laser 20 mW: 514 nm
		DP solid state laser 20 mW: 561 nm
		Diode laser 30 mW: 638 nm
PULSED LASERS	Laser type	Specifications
	VIS	White Light Laser: > 1.8 mW 485–685 nm, 78 MHz
EXCITATION MODULATION	Modulation type	Specifications
	AOTF VIS	Up to 8 channels
	AOTF 405	1 channel
	Direct modulation	For 405 nm

OPTICS

Number of laser ports	Up to 2 (405 & VIS)
Number of VIS lasers	Up to 8 channels, incl. WLL lines
Excitation – emission splitting	Acousto-Optical Beam Splitter (AOBS) or Low Incident Angle dichroic beam splitters (LIAchroics)
Simultaneous visible laser lines (AOBS)	max. 8 (both in fluorescence and reflection mode)
Detection range	Internal spectral detection: 410–850 nm
405 imaging	Sequential (line/frame/stack) or simultaneous
405 correction	Unified concept with CS2 optics
Pinhole	Stable single pinhole (maintenance-free)
Pinhole-diameter control	Motorized by software, wavelength-dependent automatic mode available
Notch filters	2 Fluorifier discs with numerous options

SCANNERS

Scanner design	Specifications
Scanning concept	X2Y-scanner with optically correct scanning at low inertia
Switch FOV-scanner-resonant scanner	Online switch for tandem scanner
Field-of-view scanner	Specifications
Maximal line frequency	5200 Hz (bidirectional)
Minimal line frequency	1 Hz
Line frequency	Freely selectable in steps of 1 Hz (unidirectional), 2 Hz (bidirectional)
Maximal frame rate 512 x 512	10 fps
Maximal frame rate 512 x 16	131 fps
Beam park	Yes
Maximal frame resolution	8192 x 8192
Scan zoom	0.75–48x
Panning	Yes
Field rotation	200° optical
Field diameter	22 mm
Resonant scanner 8kHz	Specifications
Maximal line frequency	16 kHz (bidirectional)
Minimal line frequency	8 kHz
Maximal frame rate 512 x 512	28 fps
Maximal frame rate 512 x 16	290 fps
Maximal frame resolution	2496 x 2496 pixel
Scan zoom	1.25–48x
Panning	Yes
Field rotation	200° optical
Field diameter	13 mm

SPECIFICATIONS

SCAN MODES	Scan options	Available
	REF36 xyz, xL, xyL, xyzL, xyλ, xyλL, xyzλ, xyzλL xzy, xzL, xzyL, xzλ, xzλL	Yes Yes, real-time z sectioning with SuperZ Galvanometer and PiezoZ stage
ADVANCED SCAN MODES	xyλ, xzλ, xyzλL, xyzλ, xyλλ, xzλλ	Yes (WLL)
INTERNAL CONFOCAL DETECTION	Spectral Detection Unit	Specifications
	Spectral detection range	410–850 nm, tunable
	Emission separation	Highly sensitive prism-based spectral detection
	Maximum number of detectors	5
	Tunability of emission bands	Yes
	Simultaneously tunable spectral detection channels	max. 5
	Spectral tuning resolution	1 nm across full spectrum of 410–850 nm
	Minimal detection range	5 nm
	Photon detection electronics	Specifications
	Photon counting time resolution	97 ps
	Photon counting scheme	Power counting: 0, 1, 2 (double) photons identified
	TauSense capability (pulsed excitation)	TauGating: up to 2 tunable timegates, simultaneously
		TauContrast: Mean photon arrival time image
		TauSeparation: Lifetime based component separation
		TauScan
	Digitalization resolution	8, 12 or 16 Bit
	Sampling frequency	10,3 GHz for digital and photon counting detector modes
		80 MHz for analog detector modes
DETECTOR TYPES	Power HyD S	Specifications
	Max. number of detectors	5
	Sensor type	Multi-pixel silicon photo-multiplier array
	Detection modes	Analog, reflection, counting
	TauSense capability	Yes
	Spectral sensitivity range	410–850 nm
	Typical photon detection efficiency (PDE)	> 58% @ 500 nm
LIGHTNING	Number of spectral channels	5 spectral detectors
	Lateral resolution	Up to 120 nm
	Axial resolution	Up to 200 nm
NON-CONFOCAL DETECTION	Transmitted light detection	Specification
	Brightfield/Transmitted light detector	Optional, allowing BF, DIC, etc.

ELECTRONICS	Devices	For Imaging
	Scanner control	Digital (FPGA, field programmable gate arrays)
	Trigger in/out	Yes
	Auxiliary data input channels	Up to 2
	Workstation	Dedicated HP workstations for parallel GPU processing
	Software Control	Programmable control panel with LCD function and value display
EXTENSIONS	Devices	For Imaging
	Environmental control	Various options and accessories
SOFTWARE	Core Functionality	
	Image Compass	Simplistic user interface, even for complex experiments
		Set up of multicolor experiment with one click per fluorophore
		Maximal signal yield through optimal acquisition settings selected automatically
		Multidimensional acquisition, full control of motorized hardware
	TauSense	Instant access to average arrival time (AAT) and intensity information in every experiment (TauContrast)
		Differentiate between desired and unwanted fluorescence signal (TauGating)
		Separate fluorophores using lifetime based information (TauSeparation, TauScan)
	Dynamic Signal Enhancement	Uncompromized temporal resolution up to 290 fps maintaining optimal signal to noise ratio
	Lightning	Lightning basic detection package. Fully automated online data acquisition with super-resolution down to 120 nm. Adaptive image quality determination and reconstruction
	Navigator	Navigator basic package. Spiral scan to easily generate an overview of your specimen. Stitching plus mark and find functionalities
	Lambda scan	Acquisition of emission spectrum using spectral detectors. Acquisition of excitation spectrum using white light laser
	Lambda-lambda scan	Acquisition of full excitation-emission spectrum
	Z intensity compensation	Laser power and/or detector gain adjustments within z stacks
	Optional Packages	
	LAS X Lightning Expert	Customizable image information extraction by adaptive deconvolution
	LAS X Assay Editor	Pre-configured specimen carriers
	LAS X 3D Visualization	Fast, GPU-based processing of large 3D stacks, unique clipping tool
	LAS X 2D/3D Analysis	2D/3D multi channel analysis and classification
	LAS X Measurement	2D measurements
	LAS X MicroLab	FRAP, FLIP, photoconversion, FRET (acceptor photobleaching, sensitized emission)
	LAS X FRAP	FRAP, FLIP, photoconversion
	LAS X Live Data Mode	Recording of manual and automated workflows, trigger functions, complex timelapse series
	LAS X Environmental Control	Setting up, logging and monitoring of climate conditions

SPECIFICATIONS

DLS (DIGITAL LIGHTSHEET MODULE)	Microscope stand	DMi8 CS, DMi8 CS Premium
	Synergies	Confocal (included)
	Illumination	HCX PL FLUOTAR 4x/0.13
		HC PL FLUOTAR 2.5x/0.07
		L 1.6x/0.05 DLS
	Detection	HC FLUOTAR L25x/0.95 W DLS working distance = 2.5 mm, water immersion
		HC APO L 20x/0.50 W DLS working distance = 3.5 mm, water immersion
		HC FLUOTAR L 16x/0.60 IMM CORR DLS working distance = 2.5 mm, water to BABB immersion
		HC APO L10x/0.30 W DLS working distance = 3.6 mm, water immersion
		HC FLUOTAR 5x/0.15 IMM DLS working distance = 4.95 mm, water to BABB immersion
	Mirror	TwinFlect 7.8 mm Water (specimen size: max. 3.5 mm, short axis)
		TwinFlect 7.8 mm Glycerol (specimen size: max. 3.5 mm, short axis)
		TwinFlect 7.8 mm Glycerol/BABB (specimen size: max. 3.5 mm, short axis)
		TwinFlect 5 mm (specimen size: max. 2.0 mm, short axis)
		TwinFlect 2.5 mm (specimen size: max. 1.0 mm, short axis)
	Two-sided illumination	With one illumination objective via TwinFlect mirrors
	Light sheet thickness	2.3–14 μm
	Field of view	Max. image diagonal up to 2075 μm with the 5x detection objective
	Specimen size	Diameter of sample (short axis) $\leq$ 3.5 mm, diameter long axis determined by the mounting dish
	Sample mounting	Sample mounting in standard glass bottom dishes (recommended cover slip thickness 170 μm $\pm$ 20 μm), mounting in aqueous solutions, or solutions with RI up to 1.54 (BABB) depending on optics used, specimen elevated $\sim$ 500 μm from cover slip, multiposition experiments supported
	Incubation	Dedicated stage incubation system
	Cameras	Leica DFC9000 GTC
		Hamamatsu Orca Flash 4.0 V3
	Camera properties	Pixel size 6.5 μm
	Maximum pixel format	2048 x 2048
	Bit depth	16 bit
	Max frame rate DFC9000 GTC	Up to 84 fps at 2048 x 2048 in xyt format Up to 84 fps at 1000 x 1000 in xyt format Up to 41 fps at 2048 x 2048 in xyz format Up to 50 fps at 1000 x 1000 in xyz format
	Max frame rate ORCA Flash 4	Up to 60 fps at 2048 x 2048 in xyt format Up to 93 fps at 1000 x 1000 in xyt format Up to 41 fps at 2048 x 2048 in xyz format Up to 50 fps at 1000 x 1000 in xyz format
	Wide field imaging	Transmitted and incident illumination for sample positioning
	VIS Laser (Light Sheet Generation)	All VIS lasers including White Light Laser, 405 nm
	Filter	Selection of notchfilter for simultaneous excitation with up to four laser lines. Selection of bandpass filter for detection
	Multi-channel acquisition	Fast sequential scan via AOTF
	Software	LightSheet Wizard fully integrated in LAS X
		3D Visualization and Processing Pipeline
		Environmental Control

SPACE REQUIREMENTS

Inverted Stands (options)

Small computer table (90 cm); supply unit to the left of the microscope table

**Dimensions of the system
(length x depth x height)**

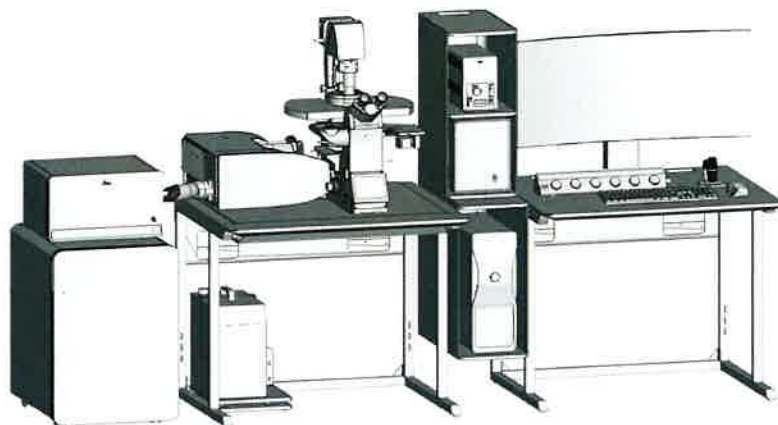
276 cm x 100 cm x 175 cm

(9' 1" x 3' 3" x 5' 9")

**Space requirements including
free room around the system**

356 cm x 250 cm

(11' 8" x 8' 2")



Large computer table (150 cm); supply unit to the left of the microscope table

**Dimensions of the system
(length x depth x height)**

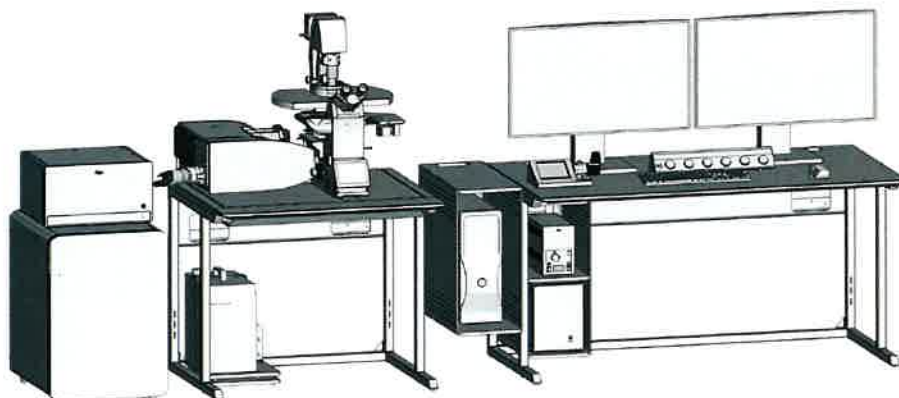
335 cm x 100 cm x 175 cm

(11' x 3' 3" x 5' 9")

**Space requirements including
free room around the system**

415 cm x 250 cm

(13' 7" x 8' 2")





STELLARIS 5

Date 2020-10-02

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The Power HyD® S is silicon based multi-pixel photon counter technology. The detector chip is a selected version not commercially offered by the vendor. Its exceptional performance is achieved out of the combination with a high-end, proprietary electronics and opto-mechanics plus an efficient cooling scheme to suppress dark noise.

Detection modes	Analog, photon counting, reflection
TauSense capability	yes
Photon detection dead-time	<1,3 ns
Spectral sensitivity range	410 - 850nm, tunable
Typical photon detection efficiency (PDE)	60,2% @ 450nm REF41
Analog mode	58,7% @ 500nm
	34,0% @ 635nm
	19,0% @ 730nm
	11,0% @ 810nm
Typical photon detection efficiency (PDE)	50,0% @ 450nm
Photon counting mode	48,6% @ 500nm
	28,0% @ 635nm
	15,9% @ 730nm
	9,2% @ 810nm
Linear dynamic range	cw, photon counting mode: up to 160 Mcts pulsed, photon counting mode: up to 100 Mcts
Power counting	0,1,2 (double) photons can be identified
TauSense capabilities	TauGating: Up to 16 tunable timegates, simultaneously TauContrast: Mean photon arrival time TauSeparation: Lifetime based component separation

Patent Information Power HyD® S (Expiration Date)

DE 10253108 B4 13.11.2022

4.1 STELLARIS Power Counting

The Power HyD® S detector offers an enhanced linear dynamic range as result of a

EU Declaration of Conformity **EU Konformitätserklärung**



Leica Microsystems CMS GmbH
Am Friedensplatz 3
68165 Mannheim, Germany

We hereby declare that the device described below, both in its basic design and construction and in the version marked by us, conforms to the relevant safety- and healthrelated requirements of the appropriate EU directives.

For the microscope models DM and DMI the respective EC Declaration of Conformity with its corresponding EC Directives is valid.

This declaration shall cease to be valid if modifications are made to the device without our approval.

Product / Bezeichnung:

Model / Gerätetyp:

EU directives / EU Richtlinien:

Harmonised standards applied /
Angewandte harmonisierte Normen :

Registration No. / Registriernummer

i.V. Steffen Laabs
Director RA/QA Life Science and Applied

Hiermit erklären wir, dass nachfolgend bezeichnetes Gerät aufgrund seiner Konzipierung und Bauart sowie in der von uns in Verkehr gebrachten Ausführung, den einschlägigen grundlegenden Sicherheits- und Gesundheitsanforderungen der EU Richtlinien entspricht.

Für die Mikroskopmodelle DM und DMI gilt die entsprechende CE Konformitätserklärung mit den korrespondierenden EU Richtlinien.

Bei einer nicht mit uns abgestimmten Änderung des Gerätes, verliert diese Erklärung ihre Gültigkeit.

Konfokales Lasermikroskopsystem

STELLARIS 5
STELLARIS 8
STELLARIS STED

Product family and accessories

Low Voltage / Niederspannungsrichtlinie:
2014/35/EU

Electromagnetic compatibility /
Elektromagnetische Verträglichkeit:
2014/30/EU

RoHS - Restriction of the use of certain hazardous substances in electrical and electronic equipment /
RoHS - zur Beschränkung der Verwendung bestimmter gefährlicher Stoffe in Elektro- und Elektronikgeräten
(2011/65/EU)

ecodesign requirements for energy-related products /
Ökodesign – Richtlinie:
2009/125/EC + VO EU 1194/2012

EN 61010-1:2010
EN 61326-1:2013
EN 60825-1:2014
EN 62471:2008

CE 231-01

Mannheim, _____ 18.09.2020