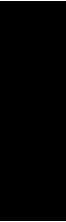

LEISTUNGSLASER

HIGH POWER LASERS



SAFETY INSTRUCTIONS

Products incorporating laser diodes will normally be classified as **class 4 laser products** according to IEC 60825-1 in a normal operation mode. Direct exposure of the human eye with laser radiation is therefore hazardous and must be strictly avoided.

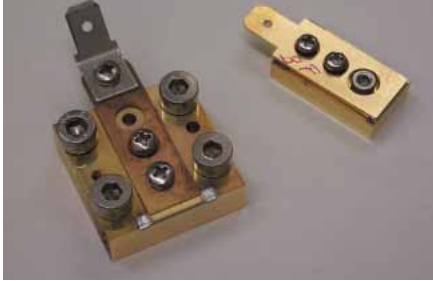
- Testing and maintenance of these products shall be performed only by personnel which is trained in laser safety. For details please refer to relevant local safety regulations and to the manufacturers requirements according to IEC 60825-1.
- Persons working with high power diode lasers must wear suitable laser protection glasses.

TYPENÜBERSICHT

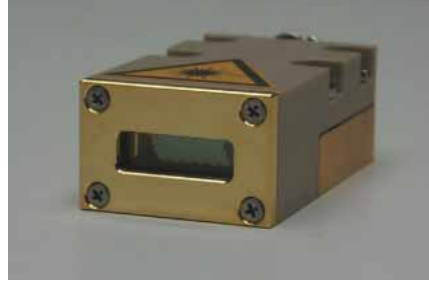
SUMMARY OF TYPES

4. Laserbarren und Stapel, qcw und cw

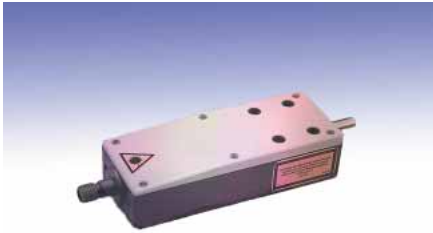
4. Laser bars and stacks, qcw and cw



SPL MNxx, SPL MYxx



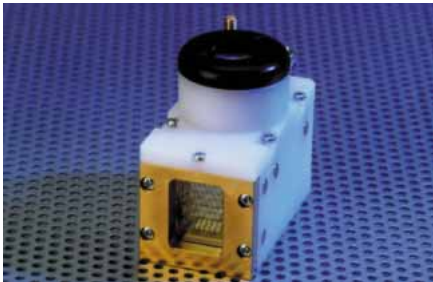
SPL MBxx



SPL MAxx



SPL ENxx, SPL QNxx



SPL EBxx

TYPENÜBERSICHT

SUMMARY OF TYPES

1. Impuls-Laserdioden



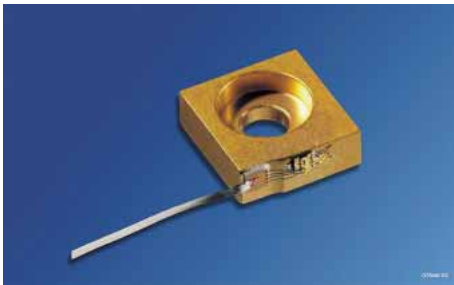
SPL PLxx

1. Pulse laser diodes



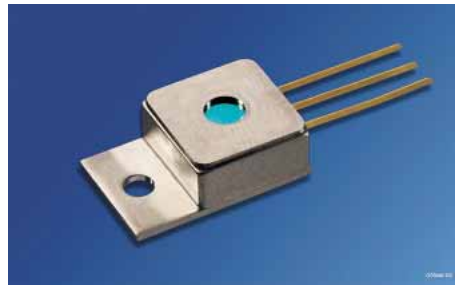
SPL LLxx

2. Laser für Dauerbetrieb (Einzelemitter)



SPL CGxx

2. CW laser (single emitter)



SPL 2Yxx



SPL 2Fxx

3. Unmontierte Laserbarren



SPL BGxx, SPL BSxx, SPL BWxx, SPL BXxx

3. Unmounted laser bars

Bezeichnungsschema

Type designation

SPL	Type	Package	Subtype	Chip Type/Opt. Output	Wavelength	
						nm (Center)
	2	sealed housing (TO-220)	G	25-emitter, cw	81	808
	B	Bar	S	75-emitter, qcw	85	850
	C	C-mount carrier	X	19-emitter, cw	90	905
	E	Actively cooled stack, cw	A	Fiber connector (SMA)	94	940
	L	Hybrid	F	Fiber connector (FC)	98	975
	M	Passively cooled bar	L	Pulse laser		
	N	Passively cooled stack, qcw	N	No Optics		
	P	Plastic package	Y	Fast axis collimated (Y)		
	Q	Actively cooled stack, qcw				
	T	actively cooled stack, cw, 2-dimensional				
	U	actively cooled stack, qcw, 2-dimensional				



Note:

cw = continuous wave
 qcw = quasi continuous wave
 xx in the Type name (e.g. SPL PLxx) refers to the wavelength

Package	Outline	Type	Wavelength nm	Power W	Output $\theta_y \times \theta_x$ (FWHM)	Package Features	Ordering Code	Fig.
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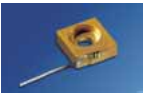
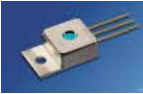

Impuls-Laserdioden

Pulsed laser diodes

	Plastic housing	SPL PLxx	780 ... 980	3 ... 50	34° × 6°	5 mm radial plastic package Pulse width < 100 ns	on request	4
		SPL PL85	850	10			Q62702-P1759	
		SPL PL90_0	905	3			Q62702-P5270	
		SPL PL90	905	16			Q62702-P1760	
		SPL PL90_3	905	50			Q62702-P5311	
	Hybrid	SPL LLxx	780 ... 980	3 ... 50	34° × 60°	Integrated laser driver stage, plastic package Pulse width < 50 ns	on request	5
		SPL LL85	850	10			Q62702-P3558	

1-2 W Module, Dauerbetrieb, Einzelemitter

1-2 W Modules, continuous wave operation (cw), single emitter

	Laser on submount	SPL CGxx	780 ... 980	1 ... 2	38° × 10°	Open heat sink (C-type)	on request	1
		SPL CG81	808	2			Q62702-P358	
		SPL CG94	940	2			Q62702-P1617	
		SPL CG98	975	2			Q62702-P3494	
	TO-220 window	SPL 2Yxx	780 ... 980	2.0	1.5° × 8°	TO-220 package SiO ₂ -window thermistor for temperature and wavelength control fast axis precollimated beam	on request	2
		SPL 2Y81	808				Q62702-P5376	
		SPL 2Y94	940				Q62702-P5462	
		SPL 2Y98	975				on request	
	TO-220 FC (fiber coupled)	SPL 2Fxx	780 ... 980	1.5	Ø 200µm, NA 0.22	Hermetical TO-220 FC-receptacle for efficient fiber coupling thermistor for temperature and wavelength control	on request	3
		SPL 2F81	808				Q62702-P5372	
		SPL 2F94	940				Q62702-P5374	
		SPL 2F98	975				Q62702-P5375	

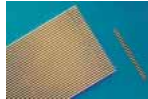
LEISTUNGSLASER

HIGH-POWER LASERS

Package	Outline	Type	Wavelength nm	Power W	Output $\theta_y \times \theta_x$ (FWHM)	Package Features	Ordering Code	Fig.
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Unmontierte 10 mm Laserbarren

Unmounted 10 mm bars




	medium power, cw	SPL BXxx	780 ... 980	30 ... 40	$38^\circ \times 12^\circ$	30% filling factor 19 emitters of 150 μm on 500 μm pitch	on request	-
		SPL BX81-25	808				Q62702-P5510	
		SPL BX94-25	940				Q62702-P5512	
	high power, cw	SPL BGxx	780 ... 980	40 ... 50	$38^\circ \times 12^\circ$	50% filling factor 25 emitters of 200 μm on 400 μm pitch	on request	
		SPL BG81-95	808				Q62702-P5503	
		SPL BG81-25	808				Q62702-P5505	
		SPL BG94-25	940				Q62702-P5507	
	high power, qcw	SPL BSxx	780 ... 980	60 ... 120	$38^\circ \times 12^\circ$	82,5% filling factor 75 emitters of 110 μm on 130 μm pitch	on request	
		SPL BS81-6	808				Q62702-P1719	

Laserbarren und Stapel

(nicht erhältlich in Deutschland, Österreich, Schweiz)

Laser bars and stacks


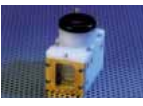
(not available in Germany, Austria, Switzerland)


	Passively cooled bar, cw uncollimated	SPL MNxx	808 940 980 (on request)	20 ... 50, cw or 60 ... 120, qcw	$38^\circ \times 12^\circ$	Bar on submount, 11 mm or 25 mm package available	on request	6
	Passively cooled bar, cw fast axis collimated	SPL MYxx	808 940 980 (on request)	38 ... 48, cw or 95 ... 115, qcw	$0.5^\circ \times 12^\circ$	Bar on submount, 11 mm or 25 mm package available	on request	
	Passively cooled bar, cw both axis collimated	SPL MBxx	808 940 980 (on request)	25 ... 30	$0.5^\circ \times 1^\circ$	Compact sealed housing	on request	7
	Passively cooled bar, cw fiber connector	SPL MAxx	808 940 980 (on request)	30, cw	Fiber coupled, $\emptyset 0.4$ mm, 0.22 NA	Sealed housing with SMA connector	on request	8

	Passively cooled stack uncollimated	SPL NNxx	808 ... 980	up to 5000 W, qcw < 4% duty cycle	$38^\circ \times 12^\circ$	Compact open modular stack Bar-to-bar distance: 0.4 ... 2 mm	on request	-
	Passively cooled stack fast-axis collimated	SPL NYxx	808 ... 980	up to 4800 W, qcw < 4% duty cycle	$0.5^\circ \times 12^\circ$	Compact open modular stack Bar-to-bar distance: 0.4 ... 2 mm	on request	

LEISTUNGSLASER

HIGH-POWER LASERS

Package	Outline	Type	Wavelength nm	Power W	Output $\theta_y \times \theta_x$ (FWHM)	Package Features	Ordering Code	Fig.
	Actively cooled stack, cw uncollimated	SPL ENxx	808 940 980 (on request)	up to 2000, cw	$38^\circ \times 12^\circ$	Linear modular stack Bar-to-bar distance: 1.4 mm, 1.7 mm, 2.3 mm	on request	9
	Actively cooled stack, cw fast axis collimated	SPL EYxx	808 940 980 (on request)	up to 1900, cw	$0.5^\circ \times 12^\circ$	Sealed housing with desiccant cell Bar-to-bar distance: 1.4 mm, 1.7 mm, 2.3 mm	on request	10
	Actively cooled stack, cw both axis collimated	SPL EBxx	808 940 980 (on request)	up to 140, cw	$0.5^\circ \times 1^\circ$	Sealed housing with desiccant cell	on request	11

	Actively cooled stack, qcw uncollimated	SPL QNxx	808 940 980 (on request)	up to 5000, qcw < 50% duty cycle	$38^\circ \times 12^\circ$	Linear modular stack Bar-to-bar distance: 1.4 mm, 1.7 mm, 2.3 mm	on request	9
	Actively cooled stack, qcw fast axis collimated	SPL QYxx	808 940 980 (on request)	up to 4800, qcw < 50% duty cycle	$0.5^\circ \times 12^\circ$	Sealed housing with desiccant cell Bar-to-bar distance: 1.4 mm, 1.7 mm, 2.3 mm	on request	10

	Two dimensional stacks actively cooled, uncollimated	SPL TNxx cw UN, qcw	808 940 980 (on request)	customized			on request	
	Two dimensional stacks actively cooled, fast-axis collimated	SPL TYxx cw UY, qcw	808 940 980 (on request)	customized			on request	-

Maßbilder in mm (inch)

Outline Drawings in mm (inch)

Figure 1 SPL CGxx

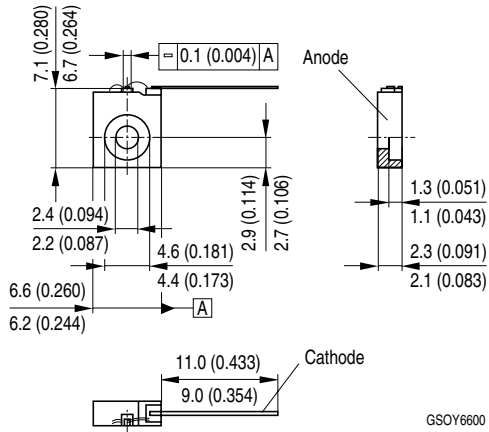


Figure 2 SPL 2Yxx

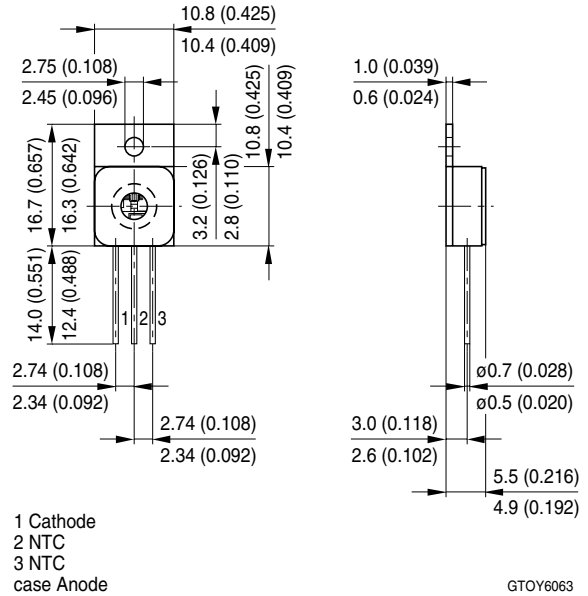


Figure 3 SPL 2Fxx

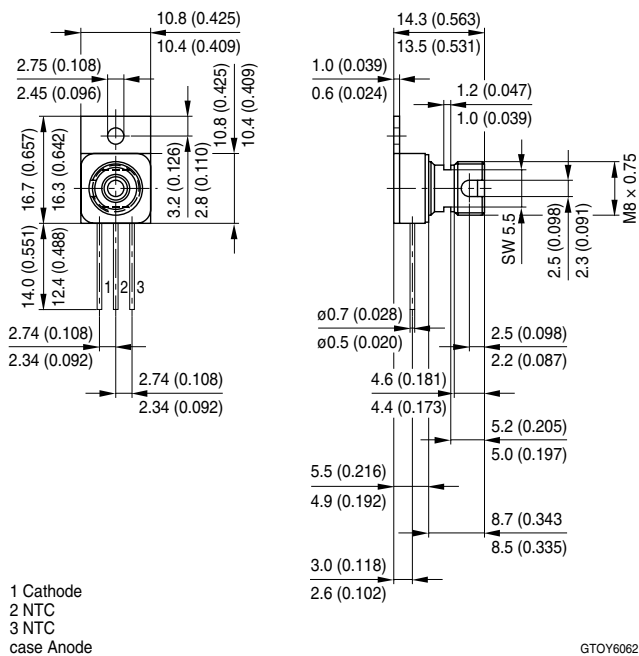
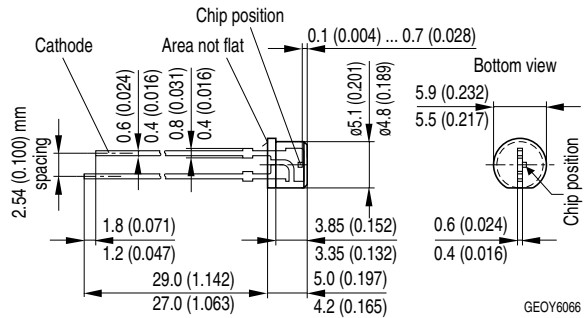


Figure 4 SPL PLxx



Maßbilder in mm (inch)

Outline Drawings in mm (inch)

Figure 5 SPL LLxx

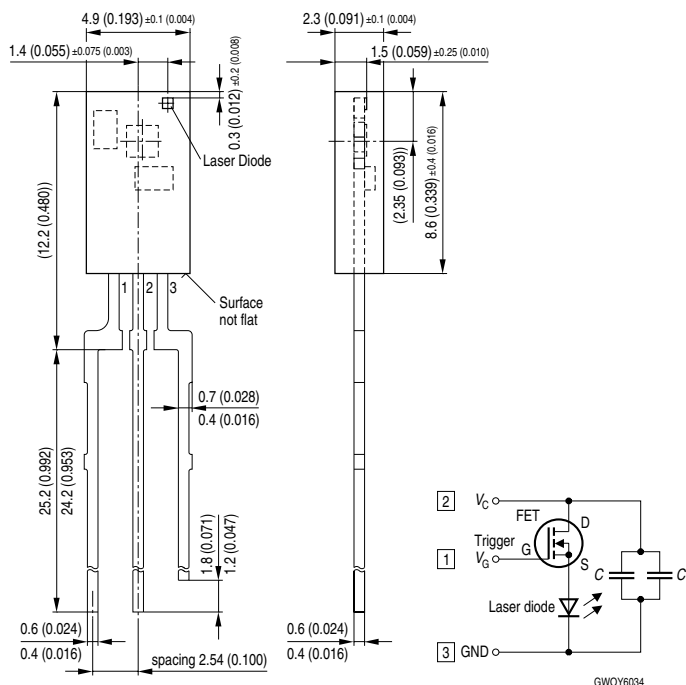
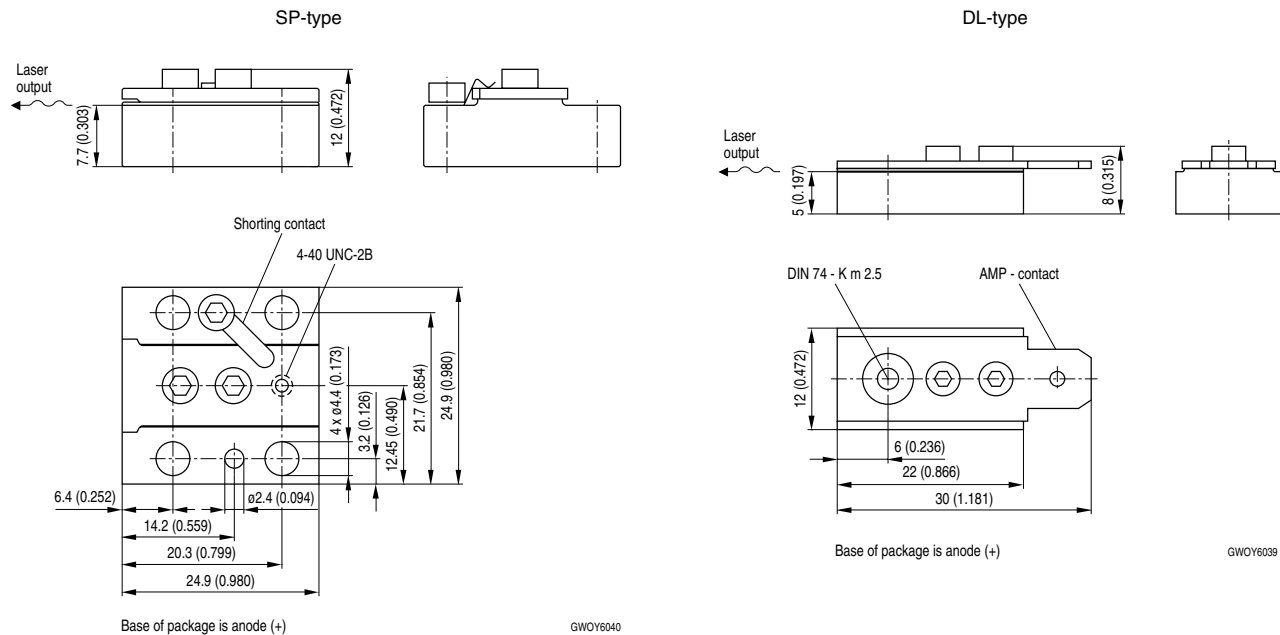
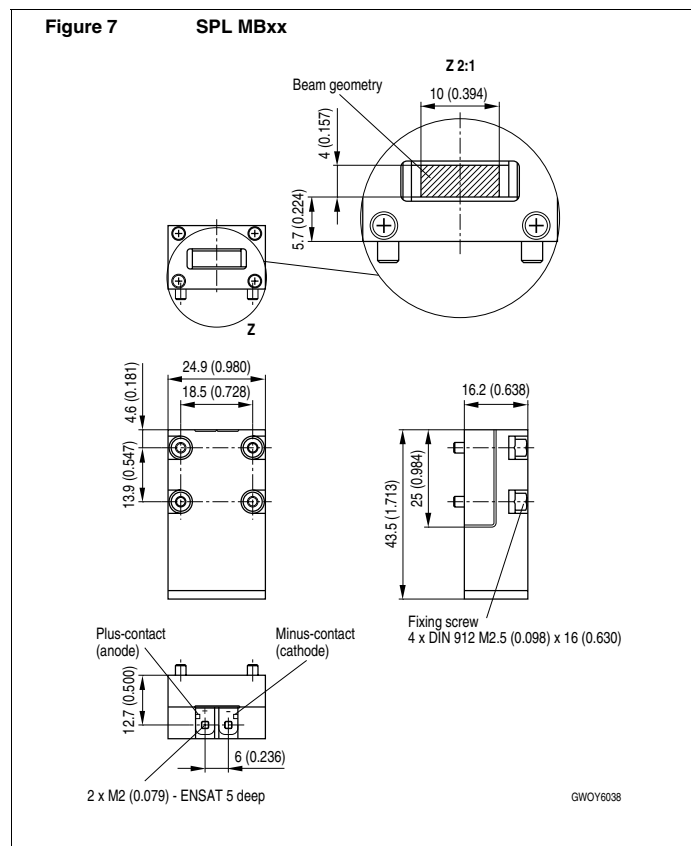


Figure 6 SPL MNxx, SPL MYxx



Maßbilder in mm (inch)



Outline Drawings in mm (inch)

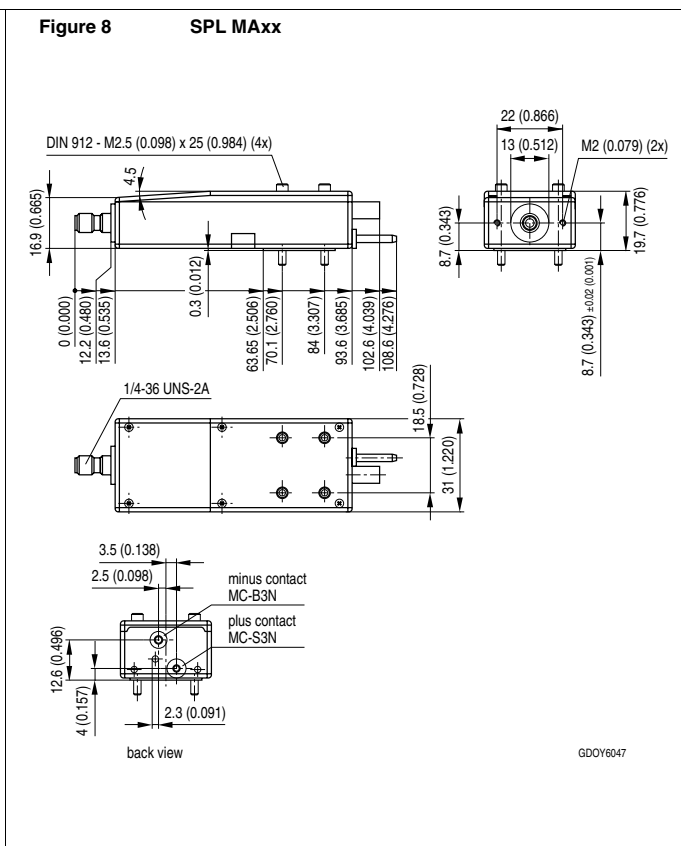
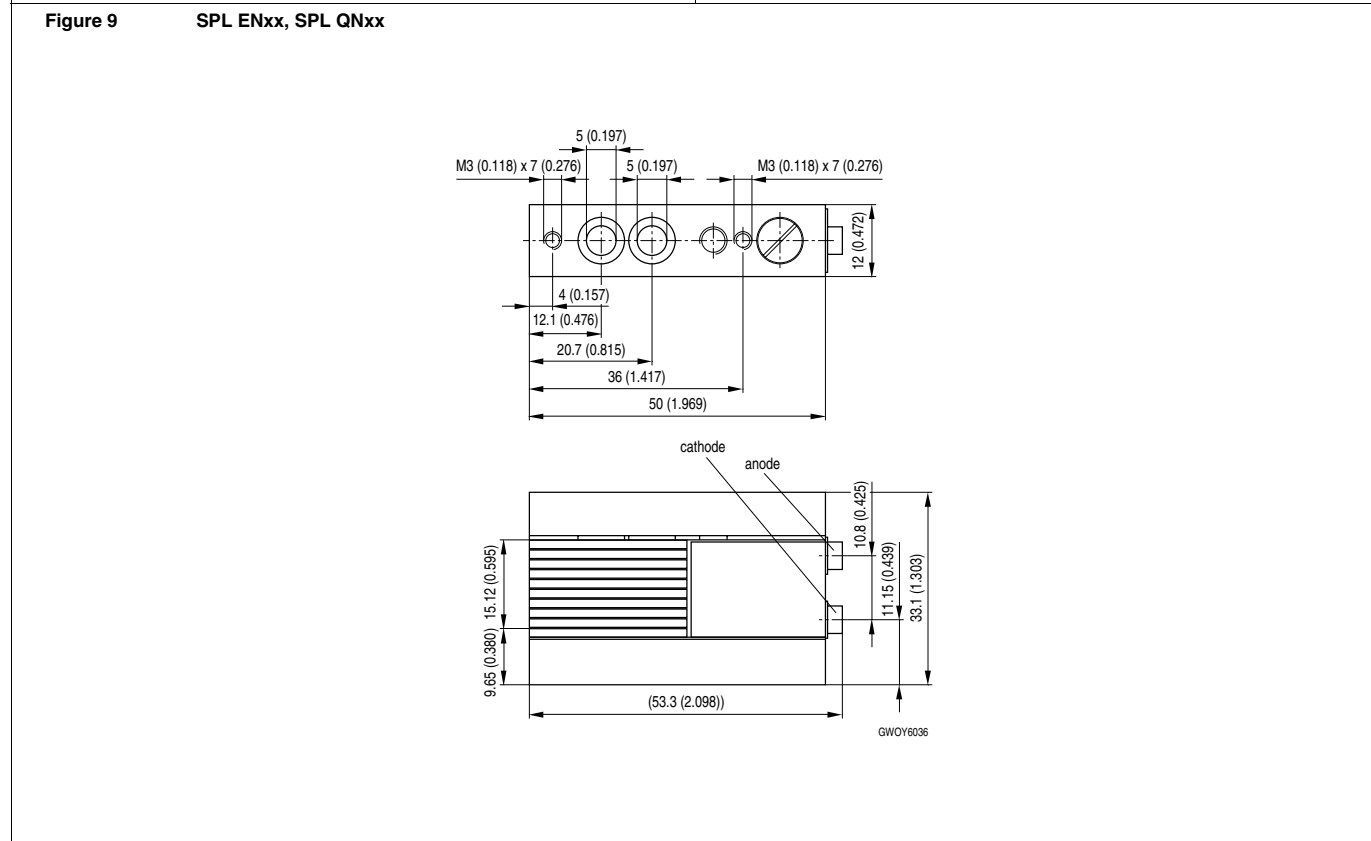


Figure 9 SPL ENxx, SPL QNxx



Maßbilder in mm (inch)

Outline Drawings in mm (inch)

Figure 10 SPL EYxx, SPL QYxx

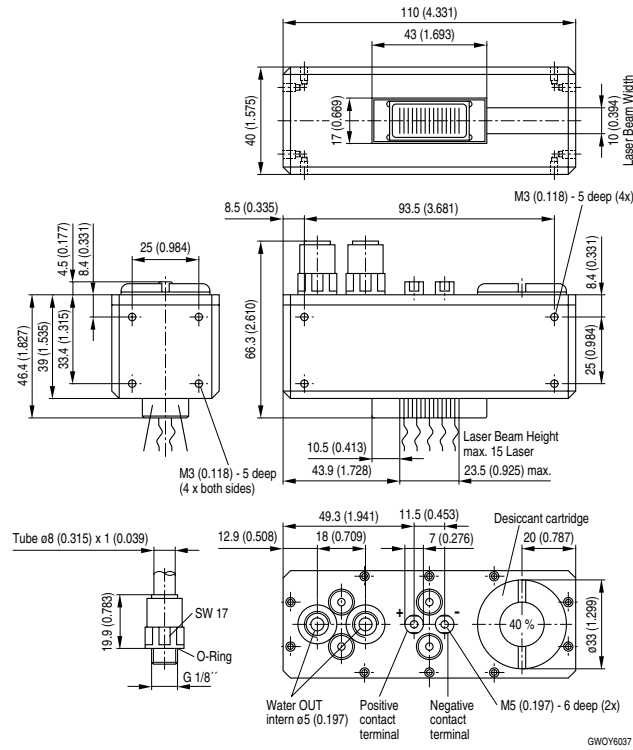


Figure 11 SPL EBxx

