
LEISTUNGSLASER

HIGH POWER LASERS

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INFORMATIONEN ZUR AUGENSICHERHEIT

Die Lichtabstrahlung von modernen Hochleistungs-LEDs ist stark genug, um das menschliche Auge zu schädigen. Blicken sie deshalb zum Schutz ihrer Augen nie aus kurzer Entfernung in das Lichtbündel einer LED. Die meisten Osram LEDs sind gemäß IEC 60825-1 in Klasse 1 eingeordnet und damit als ungefährlich anzusehen. Das Datenblatt solcher LEDs enthält keine Warnung bezüglich der Augensicherheit.

Einige unserer LEDs sind allerdings aufgrund ihrer starken Lichtemission in höhere Klassen eingestuft. Die Datenblätter dieser LEDs enthalten eine entsprechende Warnung, normalerweise auf der letzten Seite des Datenblattes.

Bei Einhaltung der im Datenblatt angegebenen maximal zulässigen Betriebsbedingungen ist kein vernünftiges Ereignis vorhersehbar, bei dem die LEDs die Grenzwerte der spezifizierten Klasse überschreiten. Diese Aussage gilt nur für einzelne LEDs unter den genannten Bedingungen. Komplexe Designs aus mehreren LEDs, zusätzliche Optiken oder extreme Anwendungsbedingungen erfordern eine gesonderte Bewertung und Klassifizierung des Gesamtsystems.

EYE SAFETY INFORMATION

The light output of modern High-Power-LEDs is strong enough to injure human eyes. Therefore, for eye safety, do not stare into the light beam of any LED at close range. Most Osram LEDs are classified as class 1 with reference to IEC 60825-1. The datasheet for these LEDs will not have a warning statement.

Due to their strong light output, some of our LEDs are classified in higher classes. The datasheets for those LEDs contain an appropriate warning statement, typically on the last page of the datasheet.

By adherence to the maximum ratings given in the datasheets, there is no reasonably foreseeable event that causes the LEDs to exceed the limits stated in the classification. This is valid for single LEDs under the mentioned conditions. Complex Multi-LED-designs, additional optics or extreme application conditions demand a separate evaluation of the entire system.

TYPENÜBERSICHT

SUMMARY OF TYPES

1. Impuls-Diodenlaser



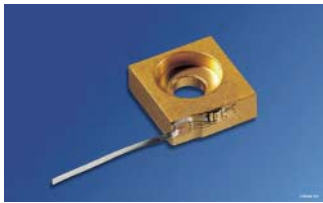
SPL PLxx

1. Pulsed diode lasers



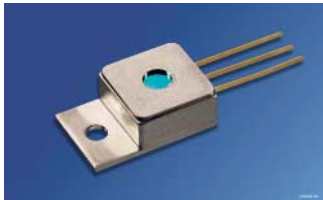
SPL LLxx

2. Diodenlaser für Dauerbetrieb (Einzelemitter)



SPL CGxx

2. CW diode lasers (single emitter)



SPL 2Yxx



SPL 2Fxx

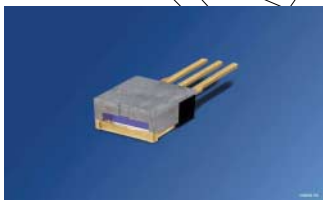
3. Unmontierte Laserbarren



SPL BGxx, SPL BSxx, SPL BXxx

3. Unmounted laser bars

4. Montierte Laserbarren



SPL LGxx

4. Mounted laser bars

Bezeichnungsschema

Type designation

SPL	Type	Package	Subtype	Chip Type/Opt. Output	Wavelength	
						nm (Center)
	P	Plastic package Hybrid pulsed laser or mounted bar C-mount carrier sealed housing (TO-B220) Bar	L	Pulsed laser	81	808
	L		G	200 µm emitter, 400 µm pitch	85	850
			X	150 µm emitter, 500 µm pitch	90	905
	C		S	110 µm emitter, 130 µm pitch	91	915
	2		Y	Fast axis collimated (Y)	94	940
	B		F	Fiber connector (FC)	98	975

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 θy × θx (FWHM)	Package Features	Ordering Code	Fig. No.
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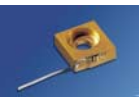
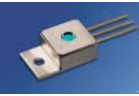
Impuls-Diodenlaser

Pulsed diode lasers

	Plastic housing	SPL PL85	850	10	25° × 11°	5 mm radial plastic package, pulse width < 100 ns	Q62702P1759	4
		SPL PL90_0	905	4	25° × 11°		Q62702P5270	
		SPL PL90	905	25	25° × 11°		Q62702P1760	
		SPL PL90_3	905	75	25° × 11°		Q62702P5353	
	Hybrid	SPL LL85	850	14	30° × 15°	Integrated laser driver stage, plastic package, pulse width < 50 ns	Q62702P3558	5
		SPL LL90	905	25	30° × 15°		Q62702P5367	6

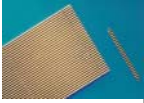
Diodenlaser für Dauerbetrieb (Einzelemitter)

CW diode lasers (single emitter)

	Laser on submount	SPL CG81-2S	808	2	38° × 8°	Open heat sink (C-type)	Q65110A1832	1
		SPL CG94-2S	940	2	38° × 8°		Q65110A1833	
		SPL CG98	975	2	38° × 8°		Q62702P3494	
	TO-220 window	SPL 2Y81-2S	808	2	2° × 10°	TO-220 package, SiO ₂ -window, thermistor for temperature and wavelength control, fast axis collimated beam	Q65110A1829	2
		SPL 2Y94-2S	940	2	2° × 10°		Q65110A1830	
	TO-220 FC (fiber coupled)	SPL 2F81-2S	808	1.5	Ø 200µm, NA 0.22	TO-220 package, FC-receptacle for efficient fiber coupling, thermistor for temperature and wavelength control	Q65110A1722	3
		SPL 2F94-2S	940	1.5			Q65110A1828	

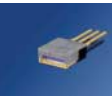
Unmontierte Laserbarren (*)

Unmounted laser bars (*)

Package	Outline	Type	Pulse Wavelength nm	Power W	Output $\theta_y \times \theta_x$ ($1/e^2$), full angle	Package Features	Ordering Code	Fig. No.
	high power, cw	SPL BG81-9S	802	40	$65^\circ \times 9^\circ$	50% filling factor, 25 emitters, emitter width 200 μm , emitter pitch 400 μm	Q62702P5503	
		SPL BG81-2S	802	50	$65^\circ \times 9^\circ$		Q62702P5505	
		SPL BG91-2S	910	50	$65^\circ \times 9^\circ$		Q65110A2089	
		SPL BG94-2S	932	50	$65^\circ \times 9^\circ$		Q62702P5507	
		SPL BG98-2S	972	50	$65^\circ \times 9^\circ$		Q65110A0739	
		SPL BX81-2S	802	30	$65^\circ \times 9^\circ$	30% filling factor, 19 emitters, emitter width 150 μm , emitter pitch 500 μm	Q62702P5510	
		SPL BX94-2S	932	30	$65^\circ \times 9^\circ$		Q62702P5512	
		SPL BX98-2S	972	30	$65^\circ \times 9^\circ$		Q65110A0740	
	high power, qcw	SPL BS81-6	804	100 ... 120	$70^\circ \times 12^\circ$	82.5% filling factor 75 emitters, emitter width 110 μm , emitter pitch 130 μm	Q62702P1719	

Montierte Laserbarren (*)

Mounted laser bars (*)

Package	Outline	Type	Wavelength nm	Power W	Output $\theta_y \times \theta_x$ ($1/e^2$), full angle	Package Features	Ordering Code	Fig. No.
	high power, cw or pulsed	SPL LG81	808	30	NA < 0.1 fast axis 9° slow axis	packaged laser array with integrated lens for fast axis collimation, integrated cooler for efficient water cooling	Q65110A2008	7

(*) andere Wellenlängen auf Nachfrage / other wavelengths available on request

Maßbilder in mm (inch)

Outline Drawings in mm (inch)

Figure 1 SPL CGxx

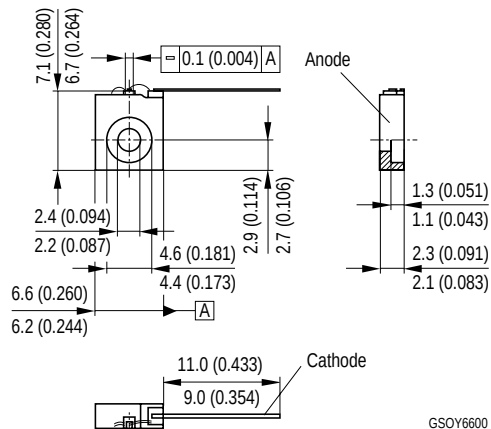


Figure 2 SPL 2Yxx

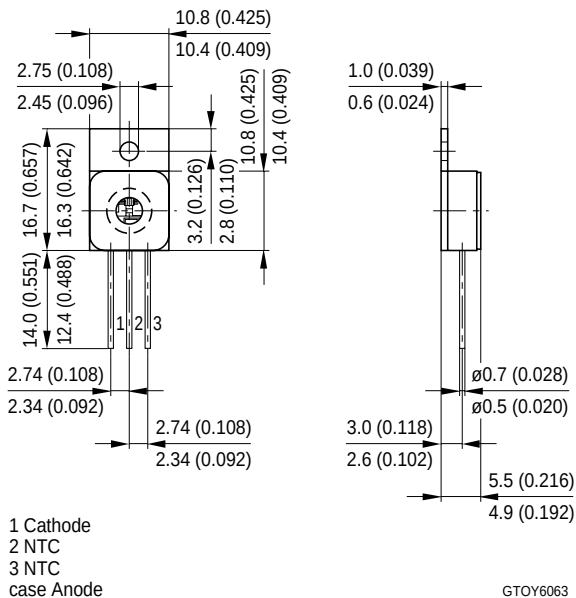


Figure 3 SPL 2Fxx

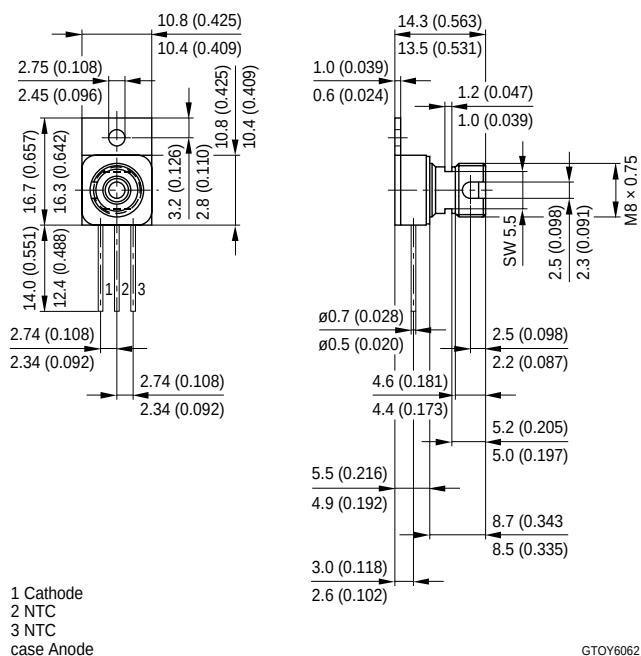
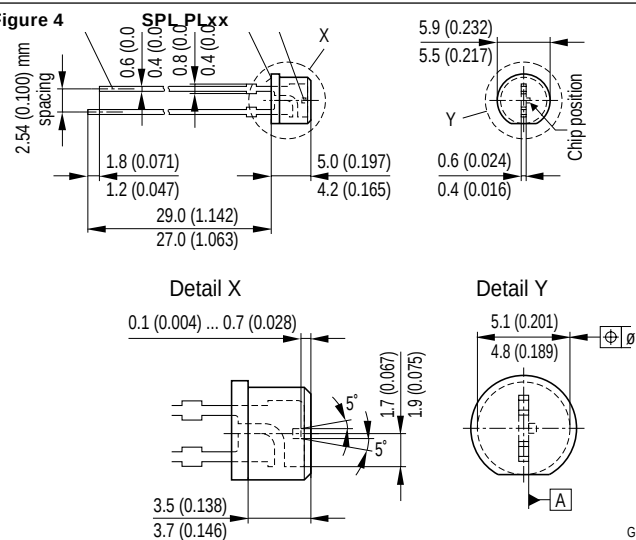


Figure 4 SPL PLxx



Maßbilder in mm (inch)

Outline Drawings in mm (inch)

Figure 5 SPL LL85

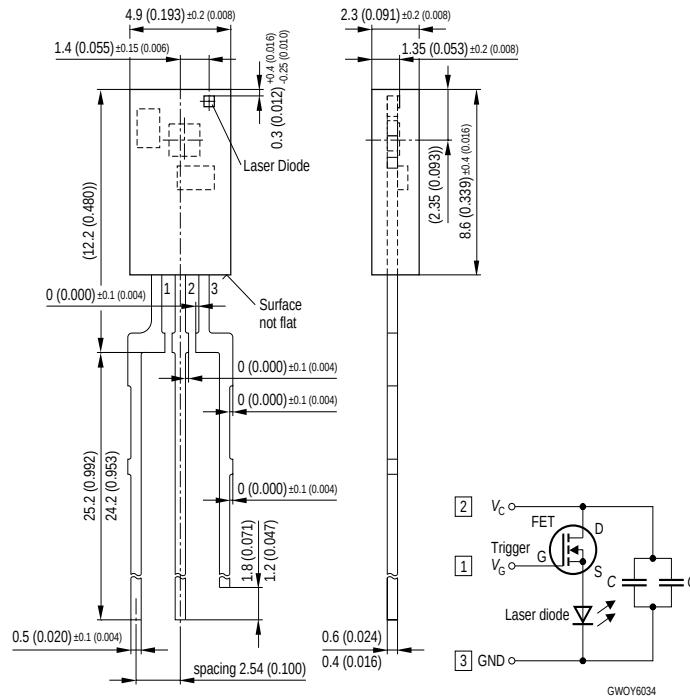


Figure 6 SPL LL90

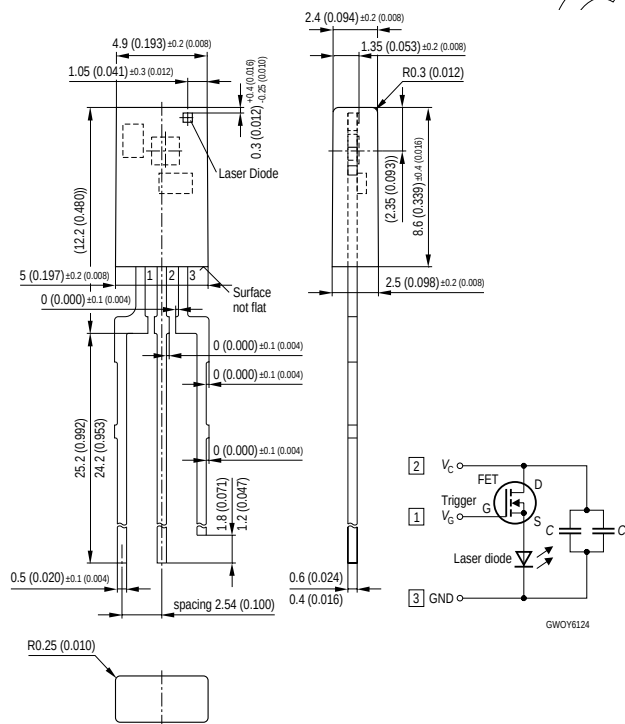


Figure 7 SPL LGxx

