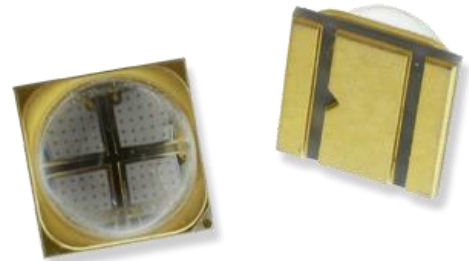




GD65X-385M-DL

- UVA High Power LED
- 385 nm, 2500 mW
- 6565 SMD Package
- Quartz Glass Lens
- Viewing Angle 60°



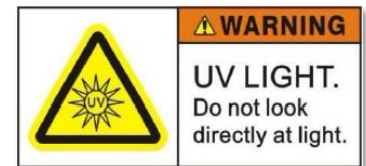
Description

GD65X-385M-DL is an **ultraviolet** multi emitter (**4 chips**) light emission source, typically emitting at **385 nm (UVA)** with an optical output power of typically **2500 mW**. The hermetically sealed ceramic SMD package features a **quartz glass lens**. **Printed circuit boards (PCB)** are available for evaluation and prototyping (see page 3)

Absolute Maximum Ratings

Parameter	Symbol	Value		Unit
		min.	max.	
Reverse Current ($V_R=10V$)	I_R		10	μA
Forward Current	I_F		2000	mA
Forward Pulse Current*	I_{FP}		3000	mA
Power Dissipation	P_D		15	W
Operating Temperature	T_{OPR}	- 40	+ 85	$^{\circ}C$
Storage Temperature	T_{STG}	- 40	+ 100	$^{\circ}C$
Soldering Temperature (max.10 s)	T_{SOL}		240	$^{\circ}C$
Junction Temperature	T_J		120	$^{\circ}C$

*duty cycle 10%, pulse length 100 μs



Electro-Optical Characteristics ($T_{CASE} = 25^{\circ}C$)

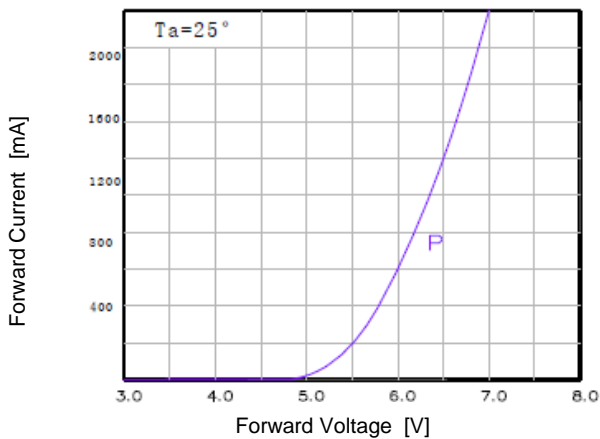
Parameter	Symbol	Values			Unit
		min.	typ.	max.	
Peak Wavelength	λ_P		385		nm
Output Power	P_O		2500		mW
Forward Voltage	V_F	6.0		8.0	V
Forward Current	I_F		1400		mA
Beam Angle	$2\theta_{1/2}$		60		deg.
Thermal Resistance	R_{th}		6.5		$^{\circ}C/W$

Forward voltage measurement tolerance ± 0.1 V
Output power measurement tolerance ± 10 %
Peak wavelength measurement tolerance ± 1 %

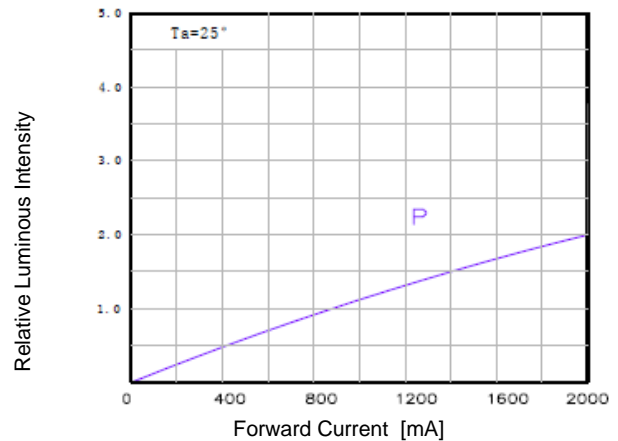


Performance Characteristics (T_{CASE} = 25°C)

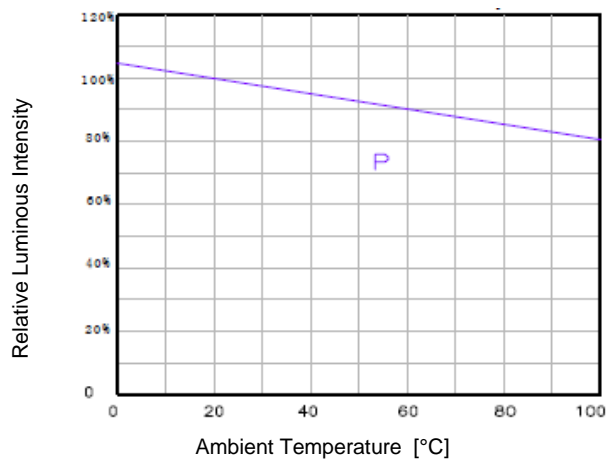
Forward Current vs. Forward Voltage



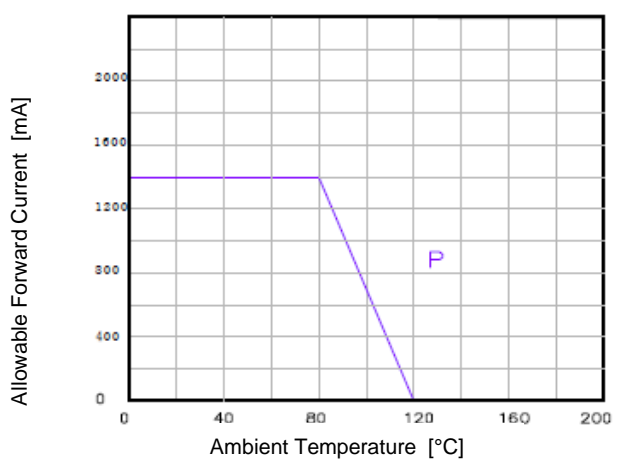
Relative Luminous Int. vs Forward Current



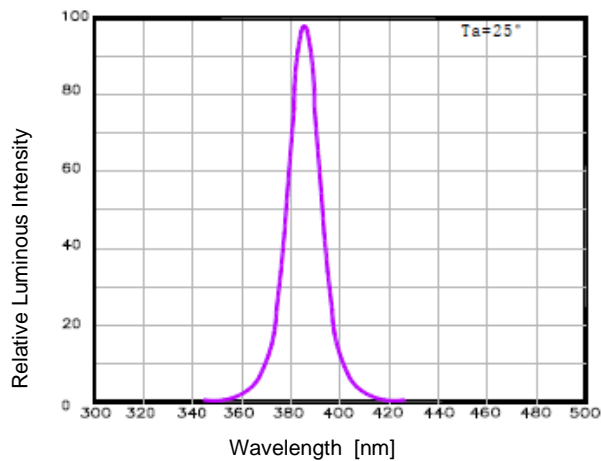
Relative Luminous Int. vs Ambient Temp.



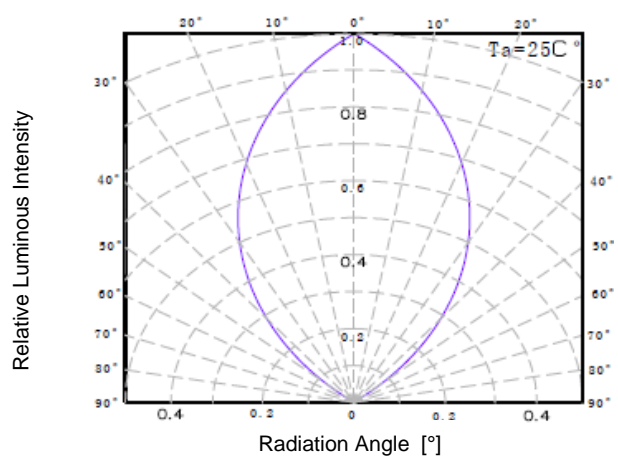
Allowable Forward Current vs. Temp.



Relative Luminous Int. vs Wavelength



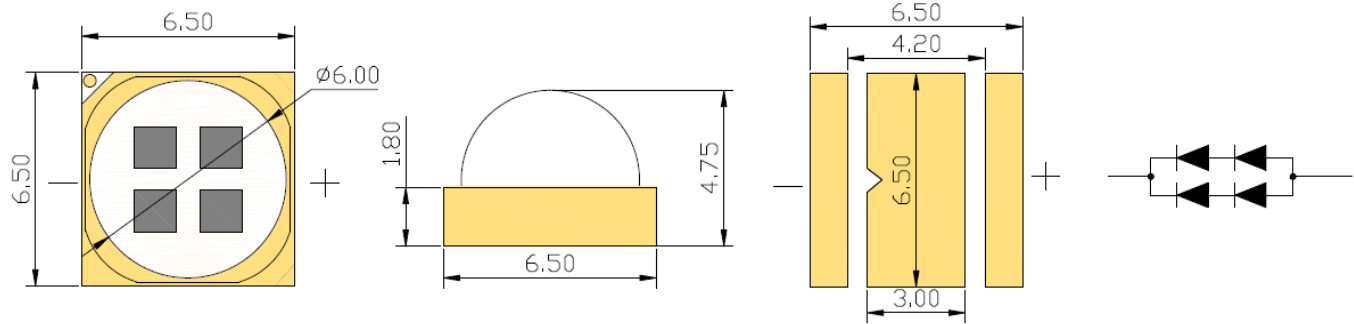
Radiation Characteristics





Outline Dimensions

SMD 6565



All dimensions in mm, tolerance ± 0.1 mm

Accessories

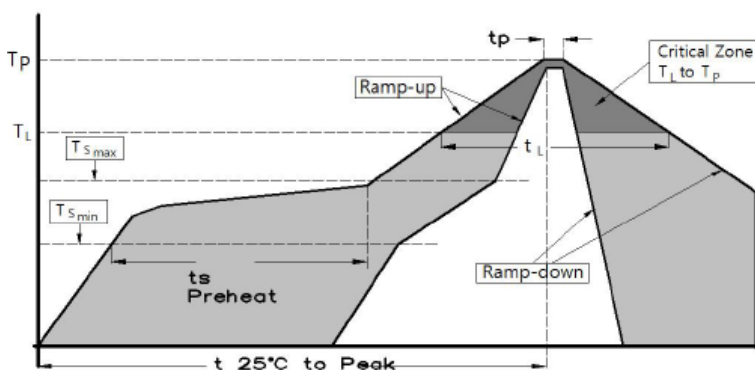
GD65-PCB-20

Printed **copper circuit board**, designed for easily soldering and mounting of GD65 series LEDs. Ideally suited for prototyping and evaluation. 20 mm diameter

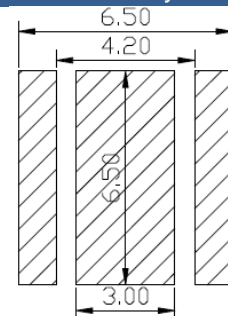


Reflow Soldering Information

JEDEC-J-STD-020C Profile



Solder Pad Layout



- all dimensions in mm
- drawing not to scale

Heating Rate ($T_{S_{MAX}} - T_P$)	≤ 3 °C/s
Minimum Preheat Temp. ($T_{S_{MIN}}$)	130 °C
Maximum Preheat Temp. ($T_{S_{MAX}}$)	180 °C
Preheat Time (t_s)	60 – 120 s
Critical Temp (T_L)	200 °C
Time within Critical (t_L)	≤ 60 s
Soldering Temperature (T_P)	≤ 240 °C
Soldering Time (t_p)	≤ 10 s
Time within 5 °C of max. Soldering Temp.	≤ 30 s
Cool Down Rate	≤ 6 °C/s
Time to T_P (from 25 °C)	< 8 min.

