



LD-450-80MG

- Violet Laser Diode
- 450 nm, 80 mW
- Multimode
- TO56 package, Flat Window



Description

LD-450-80MG is a direct emitting, **GaN based**, 450nm blue laser diode in 5.6 mm TO-Can **without photodiode**. It offers single transverse mode emission and >100 Mhz modulation bandwidth. It is an efficient radiation source for many applications like **laser projection**, holography, metrology, biomedical application...

Maximum Rating ($T_{CASE} = 25^{\circ}C$)

Parameter	Symbol	Values		Unit
		Min.	Max.	
Optical Output	P_O		80	mW
Reverse Voltage	V_R		2	V
Operating Temperature	T_{OPR}	- 40	+ 70	$^{\circ}C$
Storage Temperature	T_{STG}	- 40	+ 85	$^{\circ}C$
Soldering Temperature (max. 3s)	T_{SOL}		+ 260	$^{\circ}C$
Junction Temperature	T_J		+ 150	$^{\circ}C$



Electro-Optical Characteristics ($T_{CASE} = 25^{\circ}C$, $P_O = 80mW$)

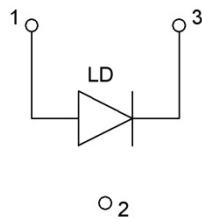
Parameter	Symbol	Values			Unit	
		Min.	Typ.	Max.		
Peak Wavelength	λ_P	440	450	460	nm	
Spectral Width (FWHM)	$\Delta\lambda$		2		nm	
Operating Voltage	V_F		5.8	7.0	V	
Threshold Current	I_{th}		30	60	mA	
Operating Current	I_F		100	145	mA	
Modulation Frequency	f	100			MHz	
Polarization	P_{GR}		100:1			
Beam Divergence (FWHM)	parallel	$\Theta_{ }$	4	7	11	deg.
	perpendicular	Θ_{\perp}	18	22	25	deg.
Thermal Resistance (junction to case)	R_{th}		34		K/W	



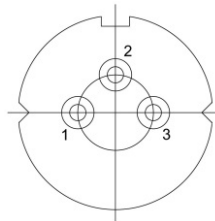
Electrical Connection

Pin Configuration

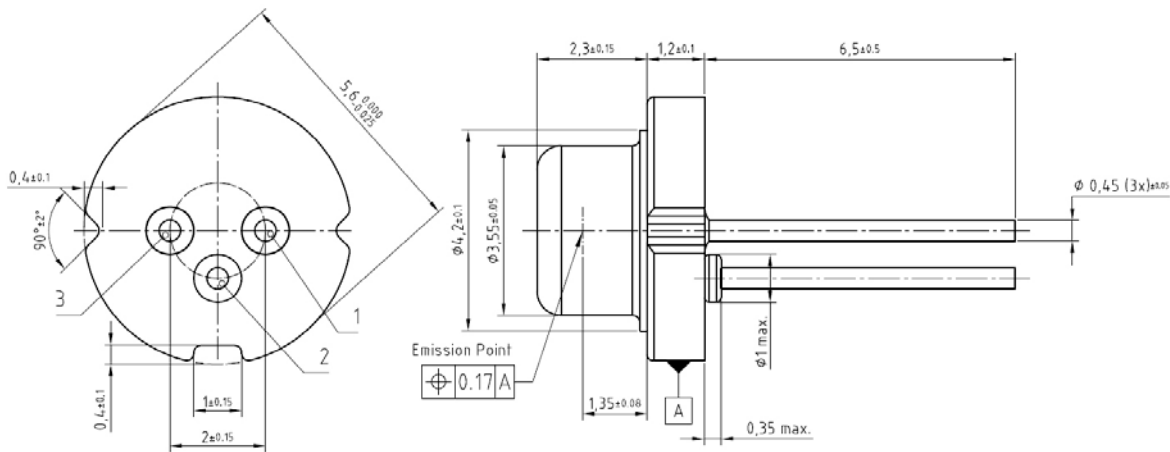
Pin #	Function
Pin 1	Anode
Pin 2	Case
Pin 3	Cathode



Bottom View



Outline Dimensions



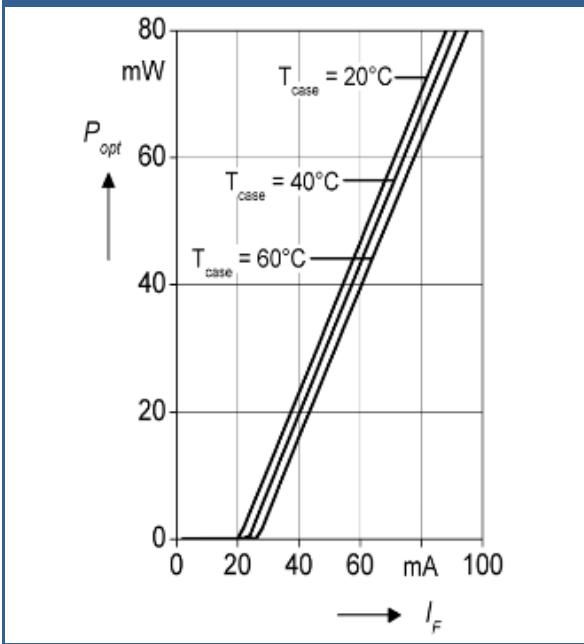
- 1: Cathode LD
- 2: Anode LD, Cathode PD
- 3: Anode PD

All dimensions in mm

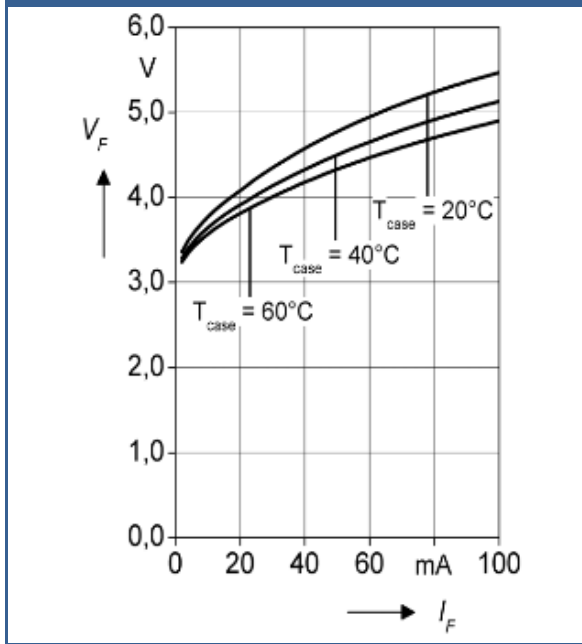


Performance Characteristics

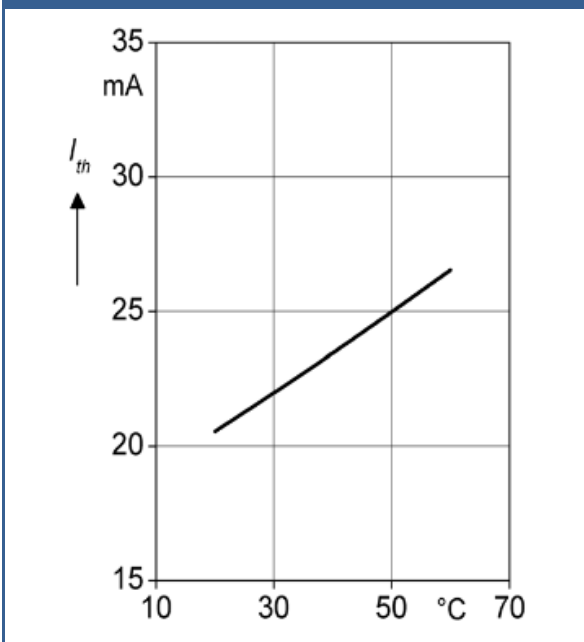
Optical Output Power vs. Operating Current



Operating Voltage vs. Operating Current



Threshold Current vs. Temperature



Relative Output Power vs. Wavelength

