

PRELIMINARY SPEC SHEET

CVB 450-TO56R

450 nm Pulsed Laser Diode Module for Metrology Applications

Description:

The CVB 450-TO56R laser diode module is a 450 nm GaN laser diode packaged in a 3 pin coaxial format. The laser diode is optically coupled to a 200/230/500um fiber pigtail. The device includes an ESD protection diode. The CVB 450-TO56R laser diode modules are specifically designed for uncooled optical metrology applications where pulsed optical power is desired. The CVB 450-TO56R is RoHS compliant.

Characteristics ($T_{amb} = 25^{\circ}C$. unless otherwise specified):

Parameter	Symbol	Conditions	Min.	Typ.	Max	Units
Peak optical power (ex-fiber)	P_o	$I_f = 2000\text{ mA}; P_w = 1\text{ us}; D/C = .01\%$	2			W
Absolute maximum forward current	I_{amax}	$P_w = 1\text{ us}; D/C = .01\%$			2500	mA
Threshold current	I_{th}	$P_w = 1\text{ us}; D/C = .01\%$		300		mA
Forward voltage	V_f	$I_f = 2000\text{ mA}; P_w = 1\text{ us}; D/C = .01\%$		6		V
Center wavelength	λ	$I_f = 2000\text{ mA}; P_w = 1\text{ us}; D/C = .01\%$	440	450	460	nm
Spectral width (RMS)	$\Delta\lambda$	$I_f = 2000\text{ mA}; P_w = 1\text{ us}; D/C = .01\%$		1		nm
Operating temp. range	T_{op}	$I_f = 2000\text{ mA}; P_w = 1\text{ us}; D/C = .01\%$	-30		70	$^{\circ}C$
Storage temp. range	T_{stg}	Non operating	-40		85	$^{\circ}C$
Fiber length	L		1			M
Fiber NA	NA			0.37		
Fiber Type	Step Index 200um SiO ₂ core / 230um HPC / 500um Tefzel					

Test Data Supplied:

Optical power @ 2000mA; $P_w = 1\text{ us}; DC = .01\%$

λ @ 2000mA; $P_w = 1\text{ us}; DC = .01\%$

PIN FUNCTION TABLE	
PIN #	FUNCTION
1	LD ANODE/ Zener CATHODE
2	CASE
3	LD CATHODE/ ZENER ANODE

