

## 450nm 2W Pulsed Laser Diode Module



### ● Product Description

The laser diode module is a 450 nm GaN laser diode in a 3-pin coaxial package. The laser diode is optically coupled with 200/230/500 $\mu$ m fiber pigtails. The device includes an ESD (electrostatic discharge) protection diode. The laser diode module is designed specifically for uncooled optical metrology applications requiring pulsed optical power, and it meets RoHS standards.



## ● Product features

High peak power; High-speed modulation; Wide wavelength selection;

Compact packaging; Low thermal resistance design

## ● Part Number

MP-PLD-450-2-T056

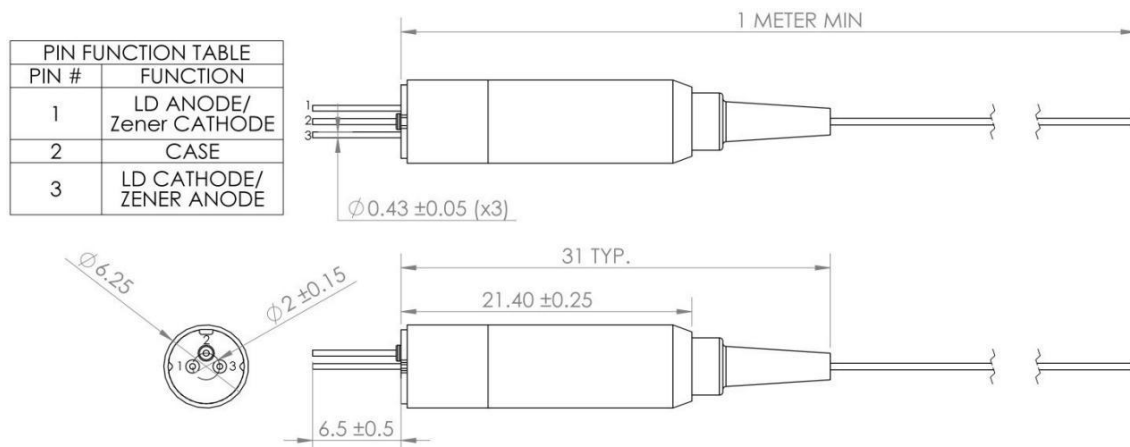
## ● Application area

LiDAR | Laser ranging | Fiber-optic sensing | Medical equipment | Optical triggering

## ● Core parameters

Center wavelength	Spectral width	Peak optical power
450 nm	(RMS)1nm	min 2W

## ● Dimension Drawing





## ● General Parameters

Model parameters

Product performance

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

Parameters	symbol	conditions	Min. value	Typical values	Max. value	unit
Peak optical power (except fiber)	$P_o$	$I_f = 2000 \text{ mA};$ $P_w = 1 \text{ us}; \text{ D/C}$ $= .01\%$	2			W
Absolute Max. Forward current	$I_{max}$	$P_w = 1 \text{ us}; \text{ D/C}$ $= .01\%$			2500	mA
Threshold current	$I_{th}$	$P_w = 1 \text{ us}; \text{ D/C}$ $= .01\%$		300		mA
Forward voltage	$V_f$	$I_f = 2000 \text{ mA};$ $P_w = 1 \text{ us}; \text{ D/C}$ $= .01\%$		6		V
Center wavelength	$\lambda$	$I_f = 2000 \text{ mA};$ $P_w = 1 \text{ us}; \text{ D/C}$ $= .01\%$	440	450	460	nm
Spectral width (RMS).	$\Delta\lambda$	$I_f = 2000 \text{ mA};$		1		nm



		$P_w = 1 \text{ us; D/C}$ $= .01\%$				
<b>Operating temperature range</b>	$T_{op}$	$I_f = 2000 \text{ mA;}$ $P_w = 1 \text{ us; D/C}$ $= .01\%$	-30		70	°C
<b>Storage temperature range</b>	$T_{stg}$	Non-operating	-40		85	°C
<b>Light length</b>	L		1			M
<b>Fiber numerical aperture</b>	NA			0.37		
<b>Fiber type</b>	Step Index 200um SiO <sub>2</sub> core / 230um HPC / 500um Tefzel					

Provide test data:

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

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