

## TG420-LAR

### Features:

Devices made for operation in external cavity or similar optical systems.

Laser front facet features low reflectivity AR coating:  $R < 1\%$

Peak wavelength: typically 420 nm @RT

TopGaN laser diode, 5.6 mm package

### Absolute Maximum Ratings

Item	Symbol	Absolute Maximum Ratings	Unit
Allowable Reverse Current	$I_R$	1	[ $\mu A$ ]
PD Reverse Voltage	$V_R$	5	[V]
Storage Temperature	$T_{storage}$	-10 ~ 85	[ $^{\circ}C$ ]
Operating Case Temperature	$T_C$	0 ~ 60	[ $^{\circ}C$ ]

### Electric/Optical Characteristics

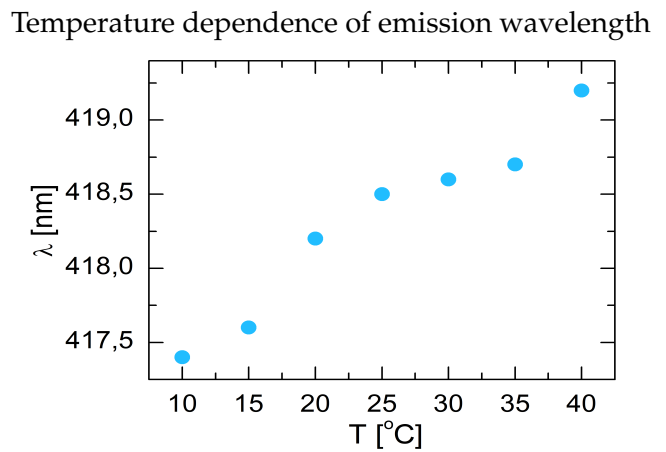
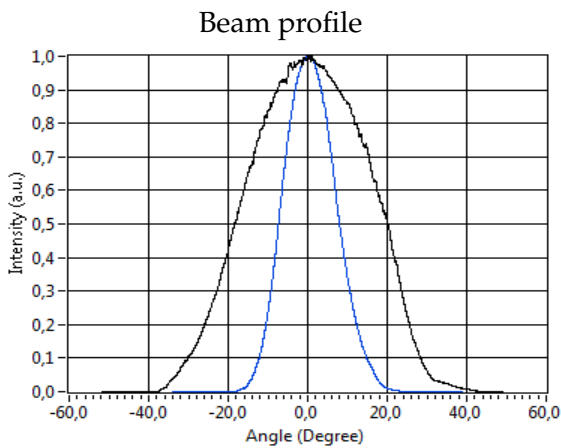
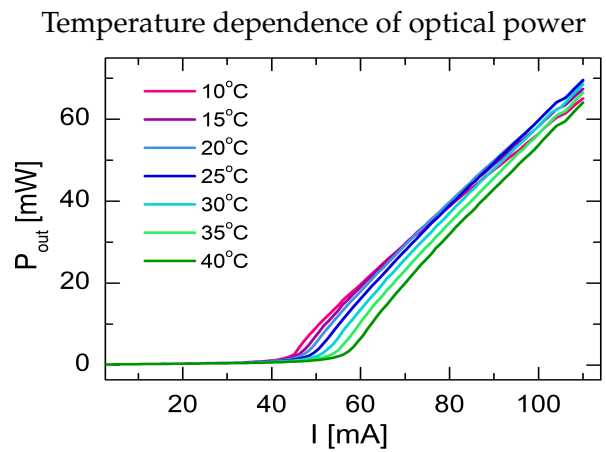
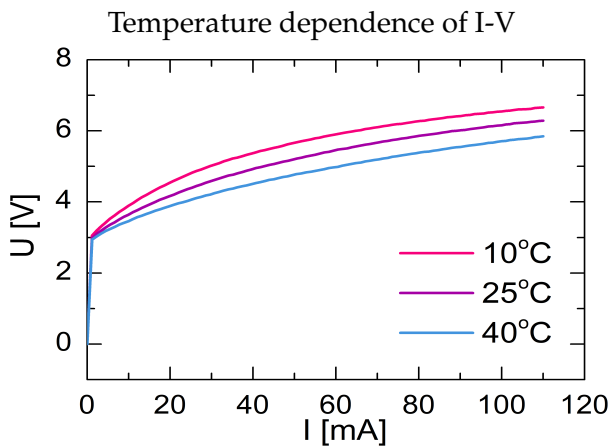
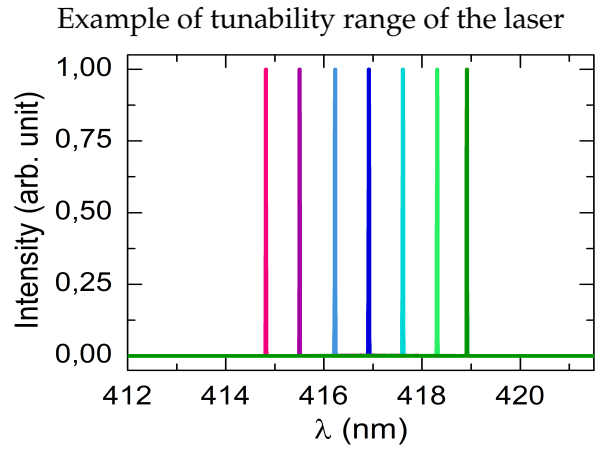
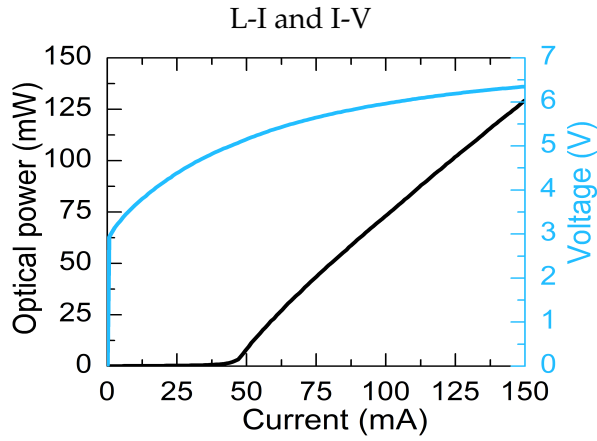
Item	Condition	Symbol	Min.	Typ.	Max	Unit
Peak Wavelength (at 50 mA)	$P_0$	$\lambda_P$	418	421	424	[nm]
Threshold Current <sup>1</sup>	CW	$I_{th}$	35	45	200	[mA]
Slope Efficiency	CW	$\eta$	0.9	1.2	1.4	[W/A]

### Beam divergence

Fast axis		32	deg
Slow axis		7	deg

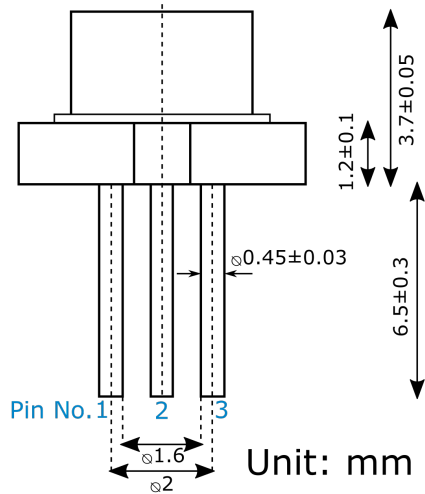
<sup>1</sup> Low reflectivity AR coating increases the threshold current.  $I_{thr}$  may become quite large, but it does not negatively influence the performance of laser diode in the external cavity.

Typical Characteristics

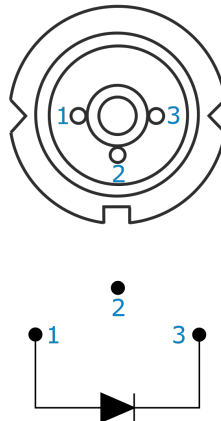


Physical dimensions and electrical connections

Physical dimensions



Electrical Connections



- 1- LD Anode (+)
- 2- Case
- 3- LD Cathode (-)

Laser is connected to isolated pins "1" and "3".  
Pin "2" is connected with the case and not active.