

ROITHNER LASERTECHNIK

SCHOENBRUNNER STRASSE 7, VIENNA, AUSTRIA

TEL: +43 -1- 586 52 43-0 FAX: +43 -1- 586 52 43-44

office@roithner-laser.com www.roithner-laser.com

RLT415-50PMG TECHNICAL DATA



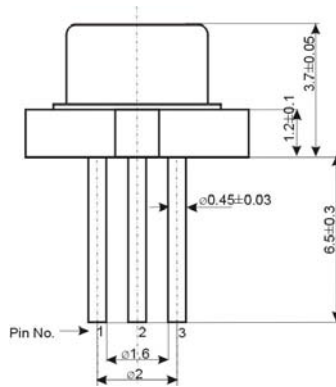
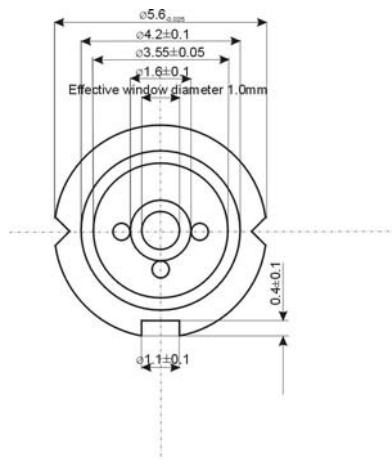
Violet Pulsed Laser Diode

Structure: GaN, multimode

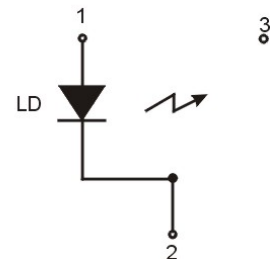
Lasing wavelength: typ. 415 nm

Pulse output power: typ. 50 mW (max. 200 mW)

Package: 5.6 mm



Pin connection



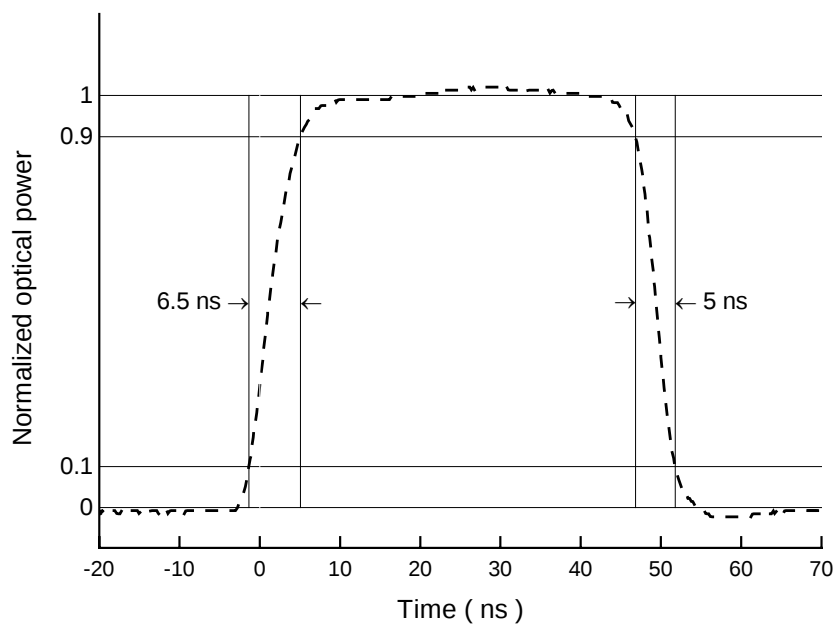
Absolute Maximum Ratings (Tc = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Optical Output Power	P _o	200	mW
LD Reverse Voltage	V _{R(LD)}	3	V
Operation Case Temperature	T _c	-20 .. +40	°C
Storage Temperature	T _{STG}	-30 .. +70	°C

Optical-Electrical Characteristics (Tc = 25°C)

CHARACTERISTIC	SYMBOL	TEST CONDITION	MIN	TYP	MAX	UNIT
Threshold Current	I _{th}	pulse mode		500		mA
Pulse Operation Current	I _{pulse}	P _o = 50 mW		650		mA
Operating Voltage	V _{op}	P _o = 50 mW		10		V
Lasing Wavelength	λ _p	P _o = 50 mW	410	415	420	nm
Lasing Bandwidth	Δλ	FWHM		1.5		nm
Emitting Aperture	A _L	P _o = 50 mW		15 x 0.3		μm ²
Beam Divergence	θ	P _o = 50 mW		8		°
Beam Divergence	θ _⊥	P _o = 50 mW		30		°
Slope Efficiency	η	P _o = 50 mW		0.3		mW/mA
Maximum Duty Cycle	D _{MAX}	P _o = 50 mW			0.3	%
Pulse Length	I _p	P _o = 50 mW		50	200	ns
Maximum Pulse Frequency	f _p	I _p = 50 ns			100	kHz
Rise Time	t _R	P _o = 50 mW		<6.5		ns
Fall Time	t _F	P _o = 50 mW		<5.0		ns
Estimated Life Time	t _L	P _o = 50 mW		1000		h
Estimated Overall Pulses	N _p	P _o = 50 mW		3.6 x 10 ¹¹		pulse

Typ. pulse shape



Typ. lasing spectrum

