

ROITHNER LASERTECHNIK

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RLT415-200PMG

TECHNICAL DATA



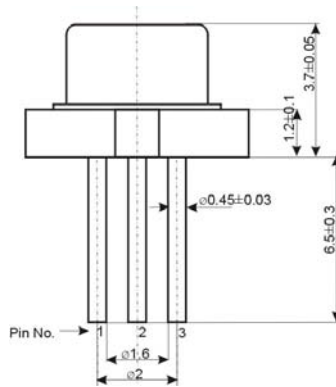
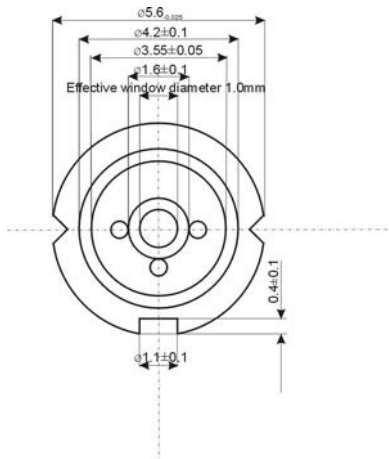
Violet Pulsed Laser Diode

Structure: GaN, multimode

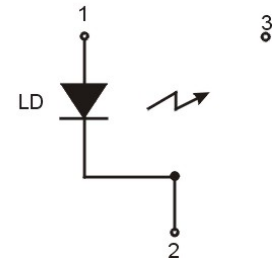
Lasing wavelength: typ. 415 nm

Pulse output power: typ. 200 mW (max. 1 W)

Package: 5.6 mm



Pin connection



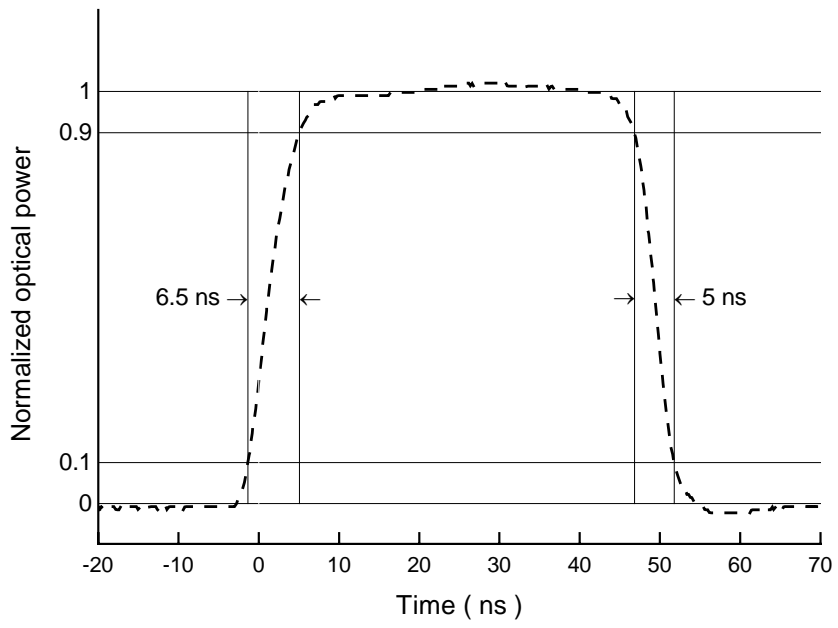
Absolute Maximum Ratings (Tc = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Optical Output Power	P _o	1	W
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 = 200 mW		1150		mA
Operating Voltage	V _{op}	P _o = 200 mW		12		V
Lasing Wavelength	λ _p	P _o = 200 mW	410	415	420	nm
Lasing Bandwidth	Δλ	FWHM		1.5		nm
Emitting Aperture	A _L	P _o = 200 mW		15 x 0.3		μm ²
Beam Divergence	θ	P _o = 200 mW		8		°
Beam Divergence	θ _⊥	P _o = 200 mW		30		°
Slope Efficiency	η	P _o = 200 mW		0.3		mW/mA
Maximum Duty Cycle	D _{MAX}	P _o = 200 mW			0.1	%
Pulse Length	I _p	P _o = 200 mW		50	200	ns
Maximum Pulse Frequency	f _p	I _p = 50 ns			100	kHz
Rise Time	t _R	P _o = 200 mW		<6.5		ns
Fall Time	t _F	P _o = 200 mW		<5.0		ns
Estimated Life Time	t _L	P _o = 200 mW		1000		h
Estimated Overall Pulses	N _p	P _o = 200 mW		3.6 x 10 ¹¹		pulse

Typ. pulse shape



Typ. lasing spectrum

