

# Q-SWITCHED EYE-SAFE LASER

## DPQL-1535-C-0040-005N-02

The DPQL-1535 is a diode-pumped, passively Q-switched laser that lases at an eye-safe wavelength of 1535 nm. The laser is built into very compact packaging but still includes an InGaAs photodiode to monitor and synchronize the laser pulse signal. The unique design and remarkable sealing technology enable stable operation over a very wide temperature range without temperature control. These features make the DPQL-1535 the ideal candidate for applications in range finding, laser imaging, and surveying equipment.



### FEATURES

- Eye-safe laser wavelength
- Internal photodiode
- Low power consumption
- Mini size
- High reliability

### APPLICATIONS

- Laser telemetry
- Laser surveying
- Remote sensing

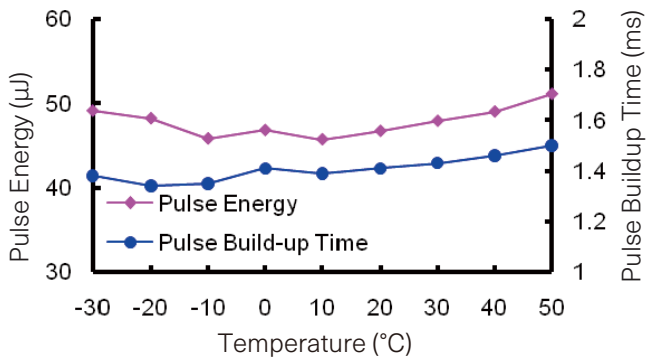
## Product Specifications

Parameter	Min	Typical	Max	Conditions
<b>Optical</b>				
Wavelength	-	1535 nm	-	
Pulse Width	-	5 ns	-	
Peak Power	-	8 kW	-	
Pulse Repetition Frequency	-	100 Hz	-	
Pulse Energy	25 $\mu$ J	40 $\mu$ J	-	
Pulse Buildup Time	-	1 ms	2 ms	
Operating Temperature (case)	-	-	-30~50°C	
Energy Stability	-	2%	5%	100 pulses @ constant temp.
Beam Diameter	-	0.25 mm	0.27 mm	At output window
Beam Divergence	-	12.5 mrad	15 mrad	Full angle, 1/e <sup>2</sup>
M Squared	-	1.2	1.3	
<b>Electrical</b>				
LD Working Current	-	-	3 A	Pump pulse peak current
LD Working Voltage	-	2 V	-	
Power Consumption	-	0.6 W	1.2 W	
<b>Mechanical</b>				
Package Dimension	$\varnothing$ 12.0 $\times$ 18.5 mm			
Off Center (angle)	-	-	20 mrad	
Off Center (position)	-	0.2 mm	0.3 mm	
Laser Weight	-	10.6 g	-	
<b>Reliability</b>				
Storage Humidity	5%~85% RH <sup>1</sup>			
Storage Temperature	-40 to 85°C			
Shock	1500 g, 0.5 ms, 6 shocks, 3 axes, 2 shocks/axis			
Vibration	20~2000 Hz, 0.02 g <sup>2</sup> /Hz, 3 axes, 1 h/axis			
Expected Lifetime (MTTF)	5000 h	-	-	At rated power & room temp

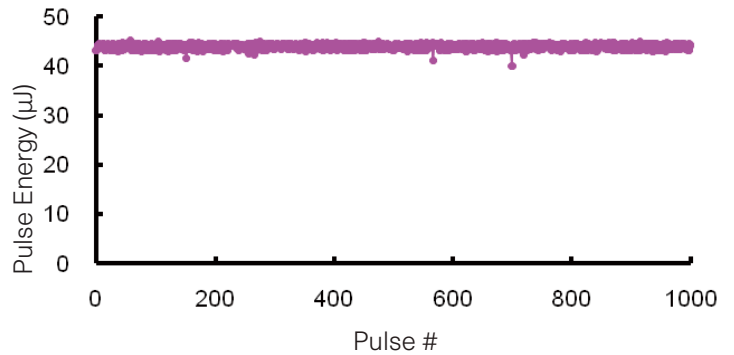
<sup>1</sup>Non-condensing.

## Typical Output Performance

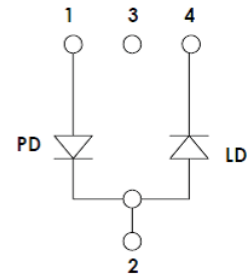
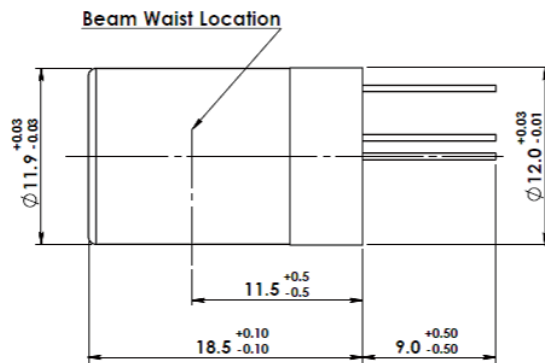
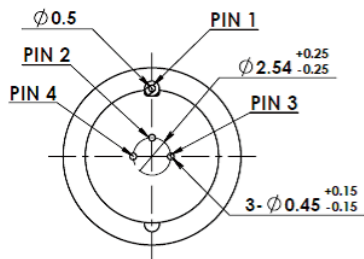
Pulse Energy & Buildup Time vs. Temperature



Pulse Energy Stability



## Dimensions and Pin Configuration (Unit: mm)



PIN Configuration: 1.PD+ 2.COM\* 3.NA 4.LD-  
Note: 1.COM\*: LD+ & PD- (conduction with case)  
2.PD: Laser Pulse detect