

CoLID-I 1550nm Short Pulse Fiber Laser for LiDAR

Product Description:



The CoLID series 1550nm short pulse fiber laser for LiDAR of Connet is a fiber laser source delivering high peak power and high pulse energy. Based on Master Oscillator Power-Amplifier (MOPA) configuration and optimized design of multi-stage optical amplification, the high peak power and the ns pulse width output can be achieved. This laser is an ideal fiber laser source for LiDAR, telemetry and range finding, etc.

Connet CoLID series 1550nm short pulse fiber laser for LiDAR (CoLID-I-1550) is housed in a mini disc type module with compact structure and small size. CoLID-I-1550 has wide operating temperature range with low power consumption. Except the integrated internal trigger mode, the pulse output also can be achieved by external TTL trigger signal, which is very suitable for system integration.

Applications:

- LiDAR
- Range Finding
- Telemetry
- 3D Scanning
- Metrology and Pollution Detection
- Other Scientific Research

Features:

- 1550nm Eye-safe wavelength
- High peak power up to 10kW
- Repetition rate from 1kHz to 3MHz
- Pulse width from 0.5ns to 250ns
- Energy per pulse up to 100uJ
- Near diffraction-limit beam quality



Specifications:

Parameter	Unit	Specification		
		Min	Typ.	Max
Part no.		CoLID-I-1550		
Center wavelength ¹	nm	1540	1550	1565
Pulse energy @ <10kHz	μJ	-	100	-
Peak power	kW	-	-	10
Average power @ >100kHz	W	-	-	1.5
Pulse width	ns	0.5	-	250
Repetition rate	kHz	1	-	3000
Beam quality	M ²	<1.1		
Polarization		Random		
Output power stability ² (8hrs)	%	-	-	±1.5
Output isolation	dB	45	-	-
Operating temperature	°C	-35	-	+65
Storage temperature	°C	-40	-	+85
Power consumption (room temp.)	W	-	16	18
Operating voltage	V _{DC}	5.5-12		
Trigger mode		Internal or External TTL Trigger		
Output fiber length	m	>0.3		
Optical connector		FC/APC or Collimator		
Weight	g	<300		
Dimension	mm	90x23.5 (DxH)		

Specifications:

- Other wavelengths are available.
- The output power stability is measured under 25°C after 30 minutes' warm-up.

Ordering Information:

- CoLID-I-1550-XX-YY-ZZ-FA
- XX: Pulse width in ns
- YY: Repetition rate in kHz
- ZZ: Peak power in kW
- FA: FC/APC connector, Collimator (Col) is optional.
- Example: CoLID-I-1550-07-20-04-FA

CoLID-I 1550nm Short Pulse Fiber Laser, 7ns pulse width, 20kHz repetition rate, 4kW peak power, FC/APC connector