

1570nm OPO Laser

SKU:OP01570



OVERVIEW

This 1570nm OPO laser features a unique thermal compensation cavity design and OPO technology, ensuring high beam quality and high 1570nm conversion efficiency. The optical components within the cavity are mechanically locked and assembled in a class 1000 cleanroom to ensure the product's normal operation and long-term stability in various complex environments. It has versatile expansion interfaces for easy integration with attenuation and beam expansion modules. It is primarily used in laser ranging and scientific research applications.



TECHNICAL SPECIFICATIONS

Project	Parameter		
Laser wavelength	1570nm±6nm	1570nm±6nm	1570nm±6nm
Output power	≥20mj@20Hz	≥40mj@20Hz	≥80mj@20Hz
Pulse width	<7ns	<7ns	<7ns
Beam divergence angle	≧4mrad	≧4mrad	≧4mrad
Pulse energy stability	>90%	>90%	>90%
Repetition rate	1~100Hz (Adjustable)	1~50Hz (Adjustable)	1~30Hz (Adjustable)
Power consumption	Peak power consumption does not exceed 600W, and standby power consumption does not exceed 160W.	Peak power consumption does not exceed 600W, and standby power consumption does not exceed 160W.	Peak power consumption does not exceed 850W, and standby power consumption does not exceed 160W.
Operating cycle	Air cooling: Maximum working time per cycle is 60s with a 60s interval; can work continuously for 8 cycles.	Air cooling: Maximum working time per cycle is 60s with a 60s interval; can work continuously for 8 cycles.	Water cooling: Maximum working time per cycle is 180s with a 60s interval; can work continuously. Air cooling: Maximum working time per cycle is 60s with a 60s interval; can work continuously for 8 cycles.
Power supply	AC 220V/DC 24V	DC 24V	AC 220V
Triggering method	Both internal and external triggers are acceptable	Both internal and external triggers are acceptable	Both internal and external triggers are acceptable
Encoding accuracy	≤2us	≤2us	≤2us
Communication	RS422 serial port, external	RS422 serial port, external	

interface	synchronous input 485 level	synchronous input 485 level	RS422 serial port, external synchronous input 485 level
Dimension	≤200X120X80mm	≤550X220X120mm	≤580X240X110mm
Weight	≤2Kg	≤10Kg	≤10Kg
Cooling method	Air cooling	Air cooling	Water cooling/air cooling
Cooling water tank size	---	---	5Ux450mm
Water tank weight	---	---	<22kg
Operating temperature	-40℃~+55℃	-40℃~+55℃	0℃~+55℃
Storage temperature	-50℃~+70℃	-50℃~+70℃	-10℃~+70℃

ELECTRICAL INTERFACE

Electrical interface:

1. Requirements for connectors

J30JM-15ZK and J30JM-15ZJ are used as power supply and communication interfaces.

2. Definition of socket number of connector

The details are shown in Table 1 and 2.

Table 1 Definition of the DC28V Incoming interface

Pin	Signal definition	Remarks
1~8	24V+	
9~15	GND	

The "communication" interface is defined in the following table.

Table 2 "Communication" interface definition

Pin	Signal definition	Remarks
1	External trigger +	3.3V difference
2	External trigger -	
3	RS422 RX+	Serial port communication interface
4	RS422 RX-	
5	RS422 TX+	
6	RS422 TX-	
7	GND	Signally
8	External synchronization +	3.3V difference
9	External synchronization -	
10	NC	