

# 40mJ Laser Target Designator with Rangefinder

Model:JIO-D40M



JIO-D40M small laser target designator with rangefinder is an airborne equipment that provides sufficient guidance reflection energy for laser semi-active guided bombs and missiles, continuously tracking and implementing laser irradiation on targets. Communication is achieved through the RS422 communication interface, which has the characteristics of outstanding performance and simple operation. It has a wide range of application scenarios and the following advantages: small size, light weight, low power consumption, suitable for various platform environments such as airborne, vehicular, and shipborne. Laser wavelength: 1064nm, direct contact with the human eye is prohibited.

## Product Functions

Laser ranging function and real-time reporting distance value;

Power polarity reverse protection, over current and over voltage circuit protection;

Can be laser irradiated at the built-in set frequency of 20Hz;

Can be triggered by external synchronization signal for laser irradiation (laser irradiation (external synchronization) state);

Overtemperature alarm function: When the working temperature of the laser target designator and rangefinder is too high to continue emitting laser, it can send the overtemperature alarm status information to the upper computer and protect the safety of the laser illuminator.

laser output times reporting function;

Laser software version features

## Product features:

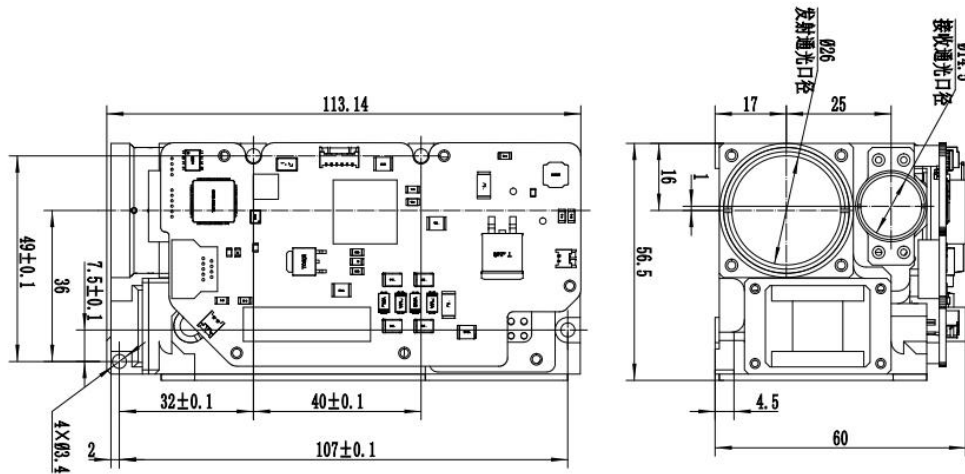
1. Unique pulse detection and automatic compensation technology, high energy stability;
2. Choose the active Q-switching pump mode, fine adjustment step, high coding accuracy;
3. Using micro-control charging and discharging technology, the feedback speed is fast, the current limiting

throttling can be achieved, the peak power is low, the power-on response is fast, and the pressure can be wide.

## Product performance indicators

Project	Indicator data
The central wavelength	1064nm±10nm
average energy	≥40mJ
energy stability	10% (statistics after 3s of light)
angle of divergence	≤0.6mrad
pulse width	15ns±5ns
Radiation distance	≥3500m
Range range	≥4.5km
service frequency	Single run, 1Hz, 5Hz, and 20Hz
encoded mode	Accurate frequency encoding, and external synchronization
Encoding accuracy	≤±2.5
service voltage	18V ~ 32V
Standby power consumption	≤4W
size	≤115mm×57mm×62mm
weight	≤800g

## Mechanical and optical interfaces



## Electrical interface

Electrical interface requirements are as follows:

The upper computer terminal realizes the crosslinking test with the end connector master head J30JZLN15ZKWA000 through the connector plug J 30 JZ / XN15TJCAL01-300. The pins of the power supply and communication port at the metering device end are defined as shown below.

Definition of the photosensor terminal power supply and communication port pin

Socket socket J30JZLN15ZKWA000		
Corresponding to the plug, J 30 JZ / XN15TJCAL01-300		
The pin number	Signal name	explain
1	28V	Power positive pole
2	28V	Power positive pole
3	28V	Power positive pole
4	POWER+	Laser power on controls the positive electrode
5	422_A	Upper computer-> laser measurement assembly +
6	422_B	Upper computer-> Laser measuring assembly-
7	422_GND	422 Communication ground wire
8	SYNC-	External Synchronization Signal-
9	28VGND	Power anode
10	28VGND	Power anode
11	28VGND	Power anode

12	POWER-	The laser power on controls the negative electrode
13	422_Y	Laser measuring assembly- -> upper computer +
14	422_Z	Laser measuring assembly-> upper machine-
15	SYNC+	External Synchronization Signal +