

## CST-LTD8020 Laser Target Designator

This LTD employs an LDA-pumped Nd:YAG crystal combined with an electro-optic Q-switching technology, to achieve a typical 1064nm pulsed laser output with a single pulse energy of 80mJ, and a beam divergence angle of 0.3mrad.

Utilizing partition temperature control technology, non-TEC design based on -20°C to +50°C, it works at a low power consumption.

The entire device can operate within an ambient temperature range from -40°C to +60°C. It can achieve illumination for 120s with a 60s interval, continuously cycling for 2 periods.

It is compatible with various combat platforms EO pods, enabling continuous ranging and periodic illumination on targets. It is a crucial laser device for implementing laser semi-active guidance process.



### Product Features

- Support continuous illumination at high temperatures: 120s continuous illuminations at +60°C.
- Low power consumption: non-TEC (-20°C ~+50°C).
- Device power consumption is less than 90W and non-TEC workable ≤ +25°C

### Application

Used for laser semi-active guidance and other electro-optical systems.

- Airborne, shipborne and vehicle-borne EO systems
- EO countermeasure system
- Weapon fire control system
- Ground-based E reconnaissance system

## Technical Specification

Model No.	
Ranging/Illumination Parameters	
Max Range	≥20km
Min Range	≤300m
Accuracy	±3m
Illumination Distance	≥8km
Ranging Frequency	1-5Hz
Illumination Frequency	0-20Hz
Continuous Ranging Time	30min@5Hz
Illumination Mode	Cycles

Illumination Time	≥120s@20Hz with 120s interval, workable continuously 2 cycles, and will rest for 30mins after 2 cycles.
Laser Coding Type	Precise frequency code, Variable interval code and customized code.
Coding Accuracy	±1μs
Operating Temperature	-40°C ~ +70°C
Storage Temperature	-55°C ~ +70°C
Vibration Test	Meet demands of MIL-STD-810H
Impact Test	Meet demands of MIL-STD-810H
Laser Parameters	
Laser Type	LD-pumped Nd:YAG
Cooling Mode	Air cooling, TEC
Wave Length	1064nm
Single Impulse Energy	≥80mJ
Energy Fluctuation	6% at +25°C (RMS); 10% (RMS) between -40°C and +70°C
Repetition Frequency	0-20Hz adjustable
Impulse Width	15ns±5ns
Divergence Angle	≤0.3mrad
Optical Axis Instability	≤0.05mrad
Laser Startup Time	≤30s
Safety Level	Class 4
Power Supply	20-32V DC (typical: 28V)
Power Consumption	Standby: ≤10W
	Average: ≤90W
	Peak: ≤210W
Communication Interface	RS422(Standard), RS232/485 is optional
Baud Rate	115200 bit/s
Weight	2.35kg
Dimension	235mm*113mm*75.5mm
Axis Parallel Error to Installation Reference	≤0.5mrad