

1064nm LASER TARGET DESIGNATOR-40mJ

OVERVIEW

This advanced laser target indicator boasts exceptional capabilities, finding wide applications in military, security, and precision targeting fields. Its features encompass a working wavelength of 1.064 μ m, pulse energy surpassing 40mJ, and precise ± 2 m ranging accuracy, empowering it with remarkable target indication and ranging capabilities. This versatile device stands as an ideal choice for guiding and measuring distances. From its stable ≤ 0.5 mrad beam divergence angle to ≤ 0.05 mrad laser optical axis stability, and ranging performance with a minimum measurement distance not exceeding 300m and a maximum measurement distance not less than 5000m, along with irradiation capabilities of reaching distances ≥ 3.5 km at a fundamental frequency of 20Hz, this device's performance is truly impressive.



TECHNICAL SPECIFICATIONS

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|---|--|---|----------------------|
| Operating mode | Ranging, Illumination | | |
| Operating wavelength | 1.064 μ m | | |
| Pulse energy | ≥ 40 mJ | | |
| Pulse energy fluctuation | Within one illumination cycle, the fluctuation of a single pulse energy does not exceed 10% of the average energy (counted after emitting light for 2 seconds) | | |
| Beam divergence angle | ≤ 0.5 mrad | | |
| Pulse width | 15ns ± 5 ns | | |
| Laser beam axis stability | ≤ 0.05 mrad (laser beam stability at room temperature of 25 $^{\circ}$ C $\pm 5^{\circ}$ C) | | |
| Laser beam axis zero-position drift | ≤ 0.15 mrad (laser beam stability at high and low temperatures) | | |
| Alignment error between the optical axis and installation benchmark | Azimuth ≤ 0.5 mrad, Pitch ≤ 0.25 mrad | | |
| Ranging performance | Ranging frequency and maximum continuous measurement time | Ranging frequency | 1Hz/5Hz, single shot |
| | | The continuous ranging time of 1Hz is not less than 5 minutes, with 1-minute rest | |
| | The continuous ranging time of 5Hz is not less than 1 minute, with 1-minute rest | | |
| | Minimum ranging distance | ≤ 300 m | |
| | Maximum ranging distance | ≥ 5000 m | |
| | Ranging accuracy | ± 2 m | |
| | Target acquisition rate | $\geq 98\%$ | |
| Illumination performance | Ranging logic | Initial and final target logic, and final target reporting | |
| | Illumination distance | ≥ 3.5 km | |
| | Illumination frequency | Fundamental frequency 20Hz | |
| | Coding method | Accurate frequency code | |
| | Coding accuracy | supporting user-defined accurate frequency | |
| Irradiation Capability | The duration of each target irradiation is not less than 20 seconds, and the interval between successive irradiations is no more than 30 seconds. The device is capable of continuous irradiation for 10 cycles, and after continuous operation, the interval between successive irradiations must be at least 30 minutes before restarting the continuous irradiation | | |
| | The duration of each target irradiation is not less than 47 seconds, and the interval between successive irradiations is no more than 30 seconds. The device is capable of continuous irradiation for 2 cycles, and after continuous operation, the interval between successive irradiations must be at least 30 minutes before restarting the continuous irradiation | | |
| Service Life | Not less than 1 million times | | |
| Weight | The overall weight of the laser rangefinder/illuminator | ≤ 500 g | |
| Power Supply Voltage | Voltage | 18V ~ 32 V | |
| Power Consumption | Standby power consumption | ≤ 4 W | |
| | Average power consumption | ≤ 60 W | |
| | Peak power consumption | ≤ 120 W | |
| Environmental Adaptability | Operating temperature | -40 $^{\circ}$ C $\sim 55^{\circ}$ C | |
| | Storage temperature | -55 $^{\circ}$ C $\sim 70^{\circ}$ C | |