

JIO-C3035X 30km LRF Module



JIO-C3035X laser rangefinder LRF module adopts Jioptik's self-developed 1570nm OPO laser module, featuring long range, low power consumption, small size, excellent beam quality, human eye safety and easy integration.

Range Performance: 30000m(2.3x2.3m NATO target),35000m (Large building)

Ranging accuracy $\pm 5\text{m}$

Measurement accuracy $\geq 98\%$

Weight $\leq 2\text{kg}$

Summary

This ranging component adopts the principle of modularized split structure design, integrated into the optoelectronic pod for target indication use, and can provide the straight line distance parameter of the target object.

The laser distance measuring component has the following functions:

- a) With self-test function;
- b) Target distance determination;

Support software upgrade and parameter update via communication interface.

Main technical indicators

- a) Wavelength: $1570\text{nm} \pm 20\text{nm}$;
- b) Energy: $> 5\text{mJ}$ (at the exit of laser light source);
- c) Divergence angle: $< 2\text{mrad}$
- d) Pulse width: $15\text{ns} \pm 5\text{ns}$;
- e) Ranging frequency: 0-10hz;

- f) Range performance: $\geq 30\text{km}$; (Atmospheric visibility $\geq 25\text{km}$, Reflectivity $\geq 30\%$, Size 2.3x2.3m NATO Target)
 - $\geq 35\text{km}$ (Large building, Visibility $\geq 30\text{km}$, Reflectivity $\geq 60\%$)
 - $\geq 40\text{km}$ (Max Range, Visibility $\geq 30\text{km}$, Reflectivity $\geq 80\%$)
- g) Minimum ranging distance: $< 500\text{m}$
- h) Ranging accuracy: $\pm 5\text{m}$
- i) Quasi-detection rate: 98%

System parameters

- a) Power supply: DC 24V (ripple $\geq 100\text{mV}$) voltage range 18 ~ 30V (GJB181A power failure does not damage the requirements);
 - b) Power consumption: peak power consumption $\leq 100\text{W}$, room temperature standby power consumption $\leq 50\text{W}$;
 - c) Warm-up time: $\leq 3\text{min}$ (room temperature);
 - d) Communication interface: RS422, baud rate 115200bps;
 - e) Working mode: internal and external triggering are available;
 - f) Protection alarm function:
 - Over-temperature protection and report fault code;
 - Laser working abnormality, ranging module abnormal alarm and report fault code;
 - g) power supply communication interface: connector requirements J30J or J29A;
 - h) Quality: $\leq 2\text{kg}$;
- Cooling mode: air-cooled

Dimension

Laser size: 220*140*72mm

Weight: $< 2\text{kg}$

Ranging module shape reference diagram:

