

LRF221 Laser Rangefinder Module

Noptel

- Ultra compact and lightweight sensor
- Highly integrated technology
- For harsh environmental conditions
- Pulsed time-of-flight measurement
- Low power consumption
- Max. range 6000 m
- Standard serial interface
- Easy integration to mobile or stationary systems
- Diode laser 1.5 μm wavelength
- Wide temperature range
- Shock and vibration resistant
- Eye safe operation
- Available without enclosure for OEM applications



The compact, eye safe and highly integrated LRF laser rangefinder is used in many applications, from demanding military measurements to portable systems.

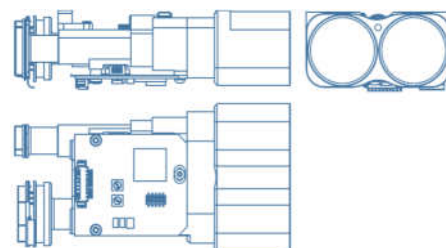
The unit is delivered without enclosure providing especially for the OEM-users the possibility to embed the unit into their own product or device.

Applications

- Vehicle mounted reconnaissance systems
- Airborne, land and maritime systems
- Observation and surveillance systems
- Fire control systems
- Mobile range finding
- Target acquisition
- Handheld targeting systems
- Sights

Noptel LRF221-M2 Laser Rangefinder Module

Technical Specifications



| Performance Characteristics | Unit | LRF221-M2 | Note |
|------------------------------------|------|------------|---|
| Laser safety class | - | 1 | Eye safe |
| Wavelength | µm | 1.5 | |
| Measurement range | m | 30 - 6000 | |
| Measurement range, Standard target | m | 3000 | Target size 2.3 x 2.3 m, visibility 10 km, target reflectivity 30%, detection probability 90% |
| Extinction ratio | dB | 27.3 | Large target @ 500 m, visibility 23 km, target reflectivity 85% |
| Measuring rate | Hz | 0.5 - 10 | Higher measuring rates have limited range |
| Precision | m | 0.5 - 1 | Depending on the distance and target reflectivity |
| Beam divergence | mrاد | 1.25 x 1.0 | |
| False detection rate | % | < 1 | |
| Target discrimination | m | < 20 | |
| Range gating resolution | m | 1 | |
| Operating temperature | °C | -32 - +65 | |
| Storage temperature | °C | -46 - +71 | |

| Mechanical characteristics | Unit | LRF221-M2 | Note |
|----------------------------|------|--------------|------------------------------------|
| Size (L/W/H) | mm | 95 / 50 / 26 | |
| Weight | g | 100 | |
| Alignment retention | mrاد | ± 0.3 | Within operating temperature range |
| Alignment pointer | nm | 635 | Laser Class 1 |
| IP Protection | - | N/A | |

| Electrical characteristics | Unit | LRF221-M2 | Note |
|--------------------------------------|------|------------|---|
| Serial interface | - | UART 3.3 V | Connector type: Molex 53261-0871 Firmware update via serial interface |
| Supply voltage | V | 2.7 - 5.0 | |
| Start-up time | s | < 0.5 | |
| Power consumption during measurement | W | < 2.5 | |
| Power consumption in stand-by mode | W | < 0.06 | Unit can be completely shut down by external signal to further minimize power consumption |

The product requires export license. Specifications are subject to change without notice. Doc.: M42932BE