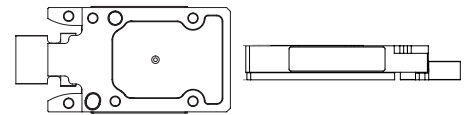
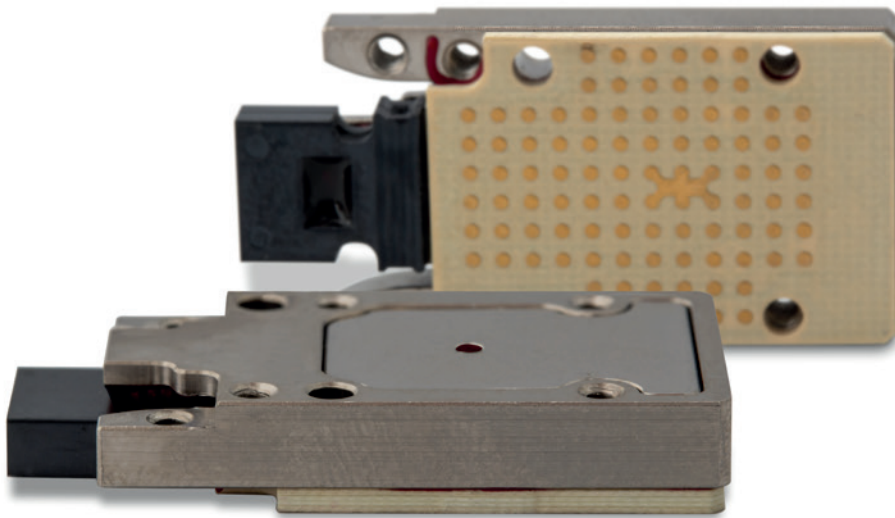


The most rugged high-performance embedded parallel optics.



Real size for *LightABLE28 LL*.

LightABLE28 LL 100G and 300G

The *LightABLE28 LL* low profile screw-in module mounts to the board via an LGA connector. It is offered as either a (4+4)-lane transceiver (100G full-duplex) or as separate 12-channel transmitter and 12-channel receiver modules (300G half-duplex as a pair) that operate at up to 28 Gbps per channel from -40°C to 85°C at ultra-low bit error rates of 10^{-12} .

The optical modules include clock and data recovery, equalizers, and pre-emphasis to compensate long traces; these features can be turned off for short traces (less than 10 cm) to reduce power consumption.

Key advantages

- **Small:** Less than 6 mm high (module and interposer)
- **Rugged:** MIL-STD 883 shock and vibration qualified
- **Sealed:** Moisture and thermal shock resistant
- **Storage temperature:** -57°C to 125°C
- **Performance:** up to 28 Gbps/channel from -40°C to 85°C
- **Sensitivity:** -7.5 dBm (typical) for BER 10^{-12}
- **Low power consumption:** 180 mW/channel

Configurations

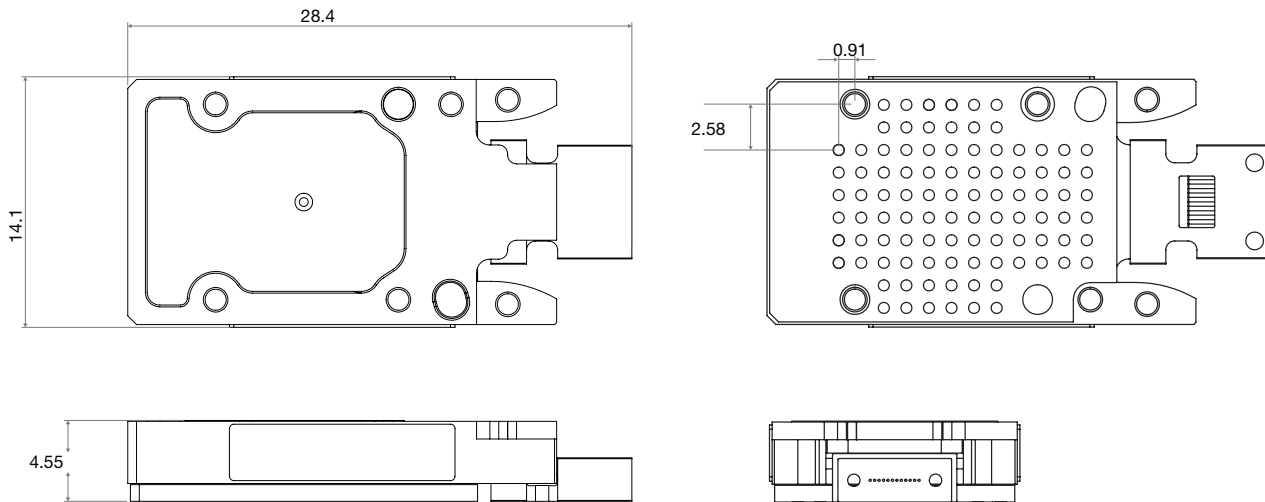
- 4TRX (100G, full duplex), in development
- 12TX or 12RX (300G), in development

Applications

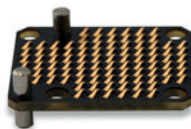
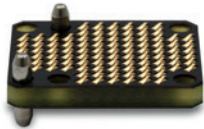
- All-digital AESA radars
- High I/O density, high BW communication links
- ISR embedded systems

LightABLE28 LL 100G (full duplex) and 300G features

- 4 TRX (4+4)-lane per module (100G, full duplex)
- 12 TX or 12 RX channel per module (300G)
- Multimode 850 nm wavelength laser
- Over 60 m reach on OM3 ribbon fiber
- Standard MT parallel fiber connector
- RoHS
- Clock and data recovery, pre-emphasis, and adjustable output
- Monitoring: LOS, RSSI, temperature, etc.
- Integrated microcontroller
- Available in industrial grade temperature range (−40 °C to 85 °C)



Drawing of LightABLE28 LL (measurements given in mm).



LGA interposers are available in different heights.

Screw-in connector shown on a LightABLE28 LL.

LightABLE28 LL ordering information

Part Number	Product Description	Channels	Bandwidth (Gbps/channel)	Sensitivity (dBm)	Mounting	Operating Temperature (°C)
LLX04P428532101	LightABLE28 LL 4TRX transmit/receive	4+4	28	−7.5 (typical)	LGA	−40 to 85
LLT12P928533001	LightABLE28 LL 12TR transmitter	12	28	n.a.	LGA	−40 to 85
LLR12P928530101	LightABLE28 LL 12RX receiver	12	28	−7.5 (typical)	LGA	−40 to 85

ACCESSORIES

415-00035	2 mm 96-positions nLGA interposer kit (Interposer + screws)
415-00015	1 mm 96-positions nLGA interposer kit (Interposer + screws)

www.reflexphotonics.com

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