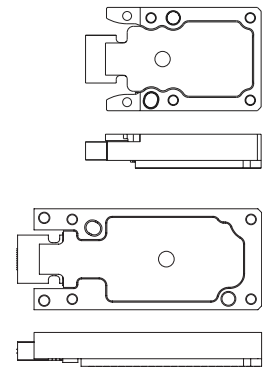
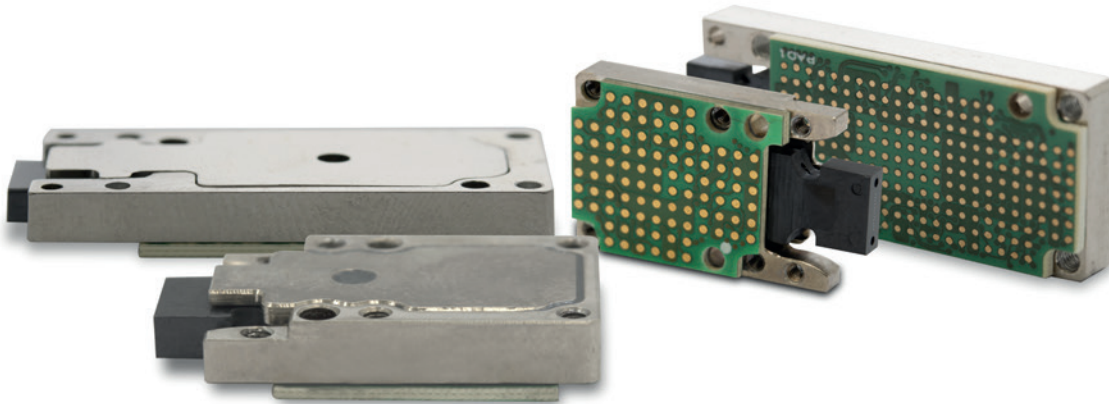


REFLEXPHOTONICS®

The most rugged high-performance embedded parallel optics.



Real size for *LightABLE LL 50G* and *150G* (top) and *LightABLE LL 150G, full duplex* and *300G* (bottom).

LightABLE LL 50G, 150G, and 300G

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:** 12.5 Gbps/lane from -40°C to 100°C
- **BER:** As low as 10^{-15}
- **Sensitivity:** -12 dBm and -9 dBm versions available
- **Proven:** Thousands used in aerospace and defense applications
- **Low power consumption:** 100 mW/lane

LightABLE LL product summary

The *LightABLE LL* low profile screw-in module (4.5 mm) mounts to the board via an LGA connector. It is offered as a (4+4)-lane transceiver, a 12-lane transmitter, or a 12-lane receiver, and a (12+12)-lane transceiver. All modules operate at 12.5 Gbps per lane from -40°C to 100°C at ultra-low bit error rates of 10^{-15} . The optical module includes 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.

Configurations

- 4TRX (50G, full duplex)
- 12TX or 12RX (150G)
- 12TRX (150G, full duplex) **NEW!**
- 24TX or 24RX (300G), in development

Applications

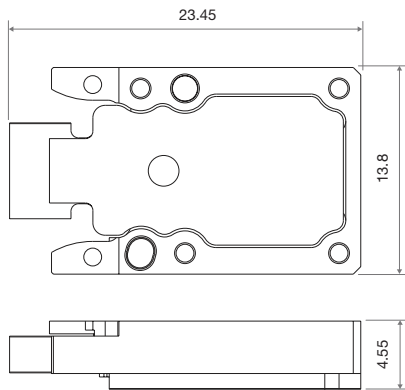
- All digital AESA radars
- High I/O density, high BW communication links
- ISR embedded systems

THE *Light* on Board® Company

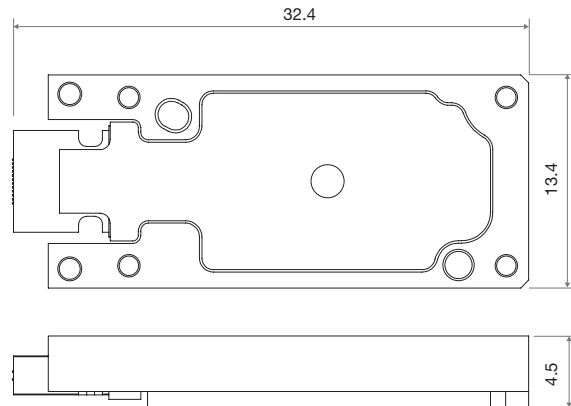
50G full duplex, 150G, 150G full duplex, and 300G

LightABLE LL features

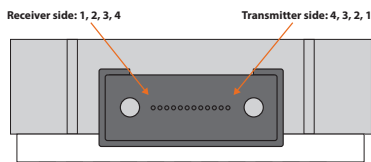
- Multimode 850 nm wavelength laser
- Over 100 m reach on OM3 ribbon fiber
- Standard MT parallel fiber connector
- RoHS
- Equalizer, pre-emphasis, adjustable output
- Monitoring: LOS, RSSI, temperature etc.
- Integrated microcontroller
- Available in industrial (−40 °C to 100 °C) grade temperature range



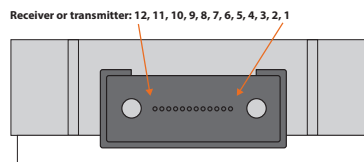
Drawing of LightABLE LL 50G and 150G



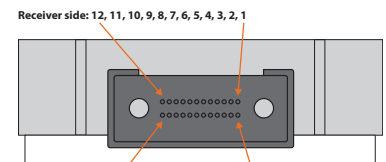
Drawing of LightABLE LL 150G (full duplex) and 300G



Fiber assignment of LightABLE LL 50G full duplex



Fiber assignment of LightABLE LL 150G



Fiber assignment of LightABLE LL 150G full duplex and 300G

LightABLE LL ordering information

Part Number	Product Description	Lanes	Bandwidth (Gbps/lane)	Sensitivity (dBm)	Mounting	Operating Temperature (°C)
LLX04P418532101	LightABLE LL 4TRX transmit/receive	4+4	12.5	−9	LGA	−40 to 100
LLX04P418532301	LightABLE LL 4TRX transmit/receive	4+4	12.5	−12	LGA	−40 to 100
LLT12P418533001	LightABLE LL 12TX transmitter	12	12.5	n.a.	LGA	−40 to 100
LLR12P418530101	LightABLE LL 12RX receiver	12	12.5	−9	LGA	−40 to 100
LLR12P418530301	LightABLE LL 12RX receiver	12	12.5	−12	LGA	−40 to 100
LLX12P418532101	LightABLE LL 12TRX transmit/receive	12+12	12.5	−9	LGA	−40 to 100
LLX12P418532301	LightABLE LL 12TRX transmit/receive	12+12	12.5	−12	LGA	−40 to 100

THE **Light** on Board® Company

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Reflex Photonics is certified to ISO 9001

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