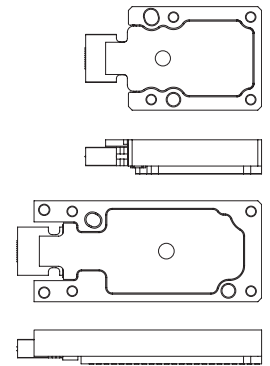
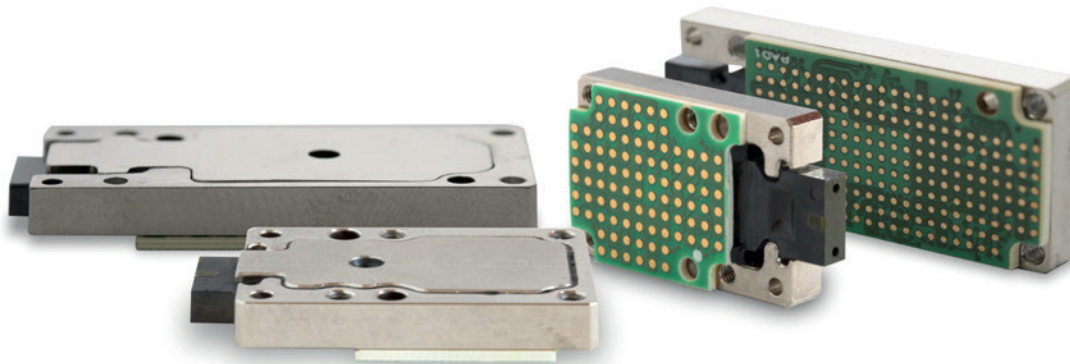


# REFLEXPHOTONICS®

The most rugged high-performance embedded parallel optics.



Real size for *LightABLE* LGA 50G and 150G (top) and *LightABLE* LGA 300G.

## LightABLE LGA 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:**  $-57^{\circ}\text{C}$  to  $125^{\circ}\text{C}$
- **Performance:** 12.5 Gbps/lane from  $-40^{\circ}\text{C}$  to  $100^{\circ}\text{C}$
- **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

### Configurations

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

### Applications

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

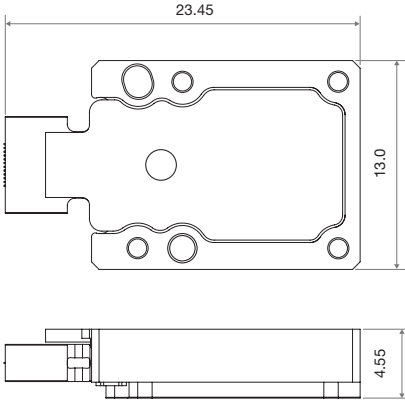
### LightABLE LGA product summary

The 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  $-40^{\circ}\text{C}$  to  $100^{\circ}\text{C}$  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.

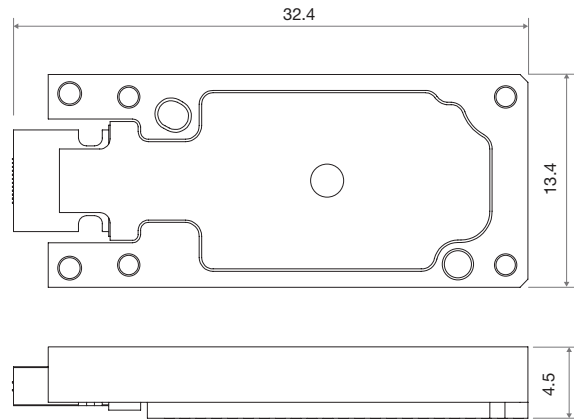
THE **Light** on Board® Company

## 50G, 150G, and 300G *Light*ABLE LGA features

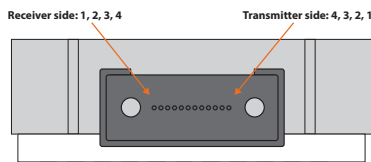
- Multimode 850 nm wavelength laser
- Over 100 m reach on OM3 ribbon fiber
- Standard MT parallel fiber connector
- RoHS
- Equalizer, pre-emphasis, adjustable output
- Monitoring: LOS, RSSI, temperature etc.
- Integrated microcontroller
- Available in industrial (−40°C to 100°C) grade temperature range



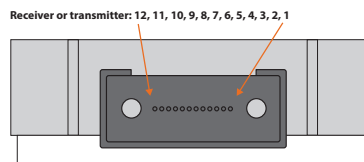
Drawing of *Light*ABLE LGA 50G and 150G



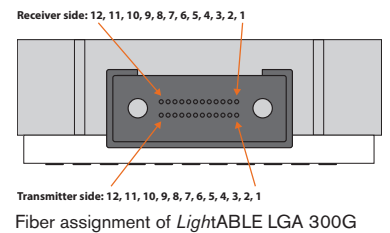
Drawing of *Light*ABLE LGA 300G



Fiber assignment of *Light*ABLE LGA 50



Fiber assignment of *Light*ABLE LGA 150G



Fiber assignment of *Light*ABLE LGA 300G

## *Light*ABLE LGA ordering information

Part Number	Product Description	Lanes	Bandwidth (Gbps/lane)	Sensitivity (dBm)	Mounting	Operating Temperature* (°C)
LMX04P418532101	LGA 4TRX transmit/receive	4+4	12.5	−9	LGA	−40 to 100
LMX04P418532301	LGA 4TRX transmit/receive	4+4	12.5	−12	LGA	−40 to 100
LMT12P418533001	LGA 12TX transmitter	12	12.5	n.a.	LGA	−40 to 100
LMR12P418530101	LGA 12RX receiver	12	12.5	−9	LGA	−40 to 100
LMR12P418530301	LGA 12TRX receiver	12	12.5	−12	LGA	−40 to 100
LMX12P418532101	LGA 12TRX transmit/receive	12+12	12.5	−9	LGA	−40 to 100
LMX12P418532301	LGA 4TRX transmit/receive	12+12	12.5	−12	LGA	−40 to 100

\*Industrial part qualified between −40°C and 85°C at 10.3125 Gbps.  
Call for module in other temperature ranges or for cables.

THE *Light* on Board® Company

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Reflex Photonics is certified to ISO 9001

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