The most rugged high-performance embedded parallel optics.

Key advantages
- **Performance**: 28 Gbps/lane from −40°C to 85°C.
- **Small**: As low as 4.5 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
- **BER**: As low as $10^{-12}$
- **Sensitivity**: −9 dBm
- **Low power consumption**: 180 mW/lane

**LightABLE28 LL product summary**
The *LightABLE28™* 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 that operates at 28 Gbps per lane from −40°C to 85°C at ultra-low bit error rates of $10^{-12}$. 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 *LightABLE28 LL* also offers CDR functions.

**Configurations**
- 4TRX (100G, full duplex)

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

Real size for LightABLE28 LL 100G.
100G *LightABLE28 LL* features

- 4 TX + 4 RX lane per device (100G, full duplex)
- 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 85°C) grade temperature range

**LightABLE28 LL ordering information**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Product Description</th>
<th>Lanes</th>
<th>Bandwidth (Gbps/lane)</th>
<th>Sensitivity (dBm)</th>
<th>Mounting</th>
<th>Operating Temperature (°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>LLX04P42532101</td>
<td><em>LightABLE28 LL</em> 4TRX transmit/receive</td>
<td>4+4</td>
<td>28</td>
<td>−9</td>
<td>LGA</td>
<td>−40 to 85</td>
</tr>
</tbody>
</table>

**ACCESSORIES**

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>415-00012</td>
<td>2.74 mm 96-positions nLGA interposer kit (Interposer + screws)</td>
</tr>
<tr>
<td>415-00015</td>
<td>1 mm 96-positions nLGA interposer kit (Interposer + screws)</td>
</tr>
</tbody>
</table>

Drawing of *LightABLE28 LL* 100G (measurements given in mm).

LGA interposers are available in different heights.

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**THE Light on Board® Company**

[www.reflexphotonics.com](http://www.reflexphotonics.com)

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Reflex Photonics is certified to ISO 9001

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