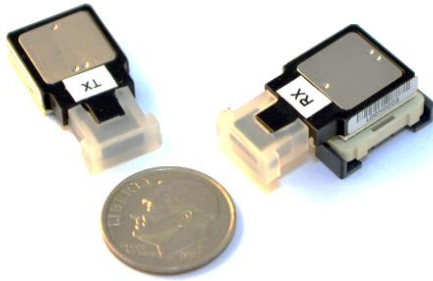


## Product Brief

### The Reflex Photonics 120Gbps LightABLE™ SR12 LH series Optical Transceiver Industrial and Commercial Temperature Range\*

THE Light on Board® family of optical engine technology in its smallest form-factor.



The Reflex Photonics LightABLE™ LH SR12 Optical Engines delivers 120Gbps over 12 fiber optic channels. The Reflex Photonics LightABLE™ Optical Engine is an integrated solution for converting between high-speed electrical and optical I/O.

The LightABLE™ Optical Engine is a low-profile pre-aligned parallel electrical - to - optical (or optical - to - electrical) transmitter (or receiver). The optical engines can be mounted directly upon a high-speed printed circuit board via surface mountable 1.27 mm pitch BGA or via a MEG-array® connector.

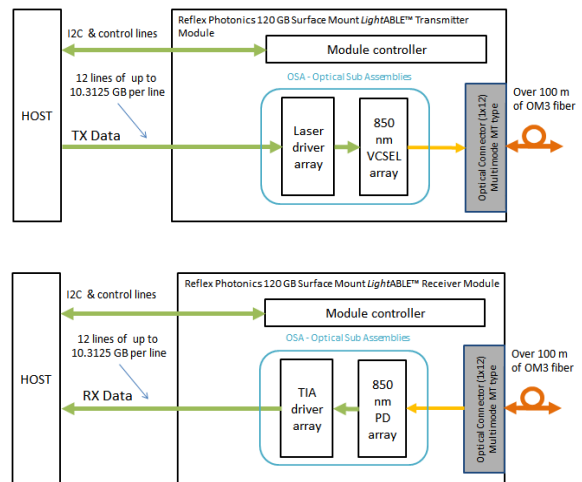
The LightABLE™ LH optical engine’s small form factor and low power consumption make it ideal for space-constrained applications.

\*The LightABLE™ LM version is recommended for new design.

\*\* Industrial part qualified between -40 °C to 85 °C. Please communicate with Reflex for detailed information on operation over 85 °C.

#### Summary Specifications:

- Commercial Temp. range 0 °C to 70 °C
- Industrial Temp. range -40 °C to 100 °C\*\*
- Bit Error Rate of 1E-12
- Sensitivity of -12 dBm
- Up to 10.3125-Gbps per channel
- Short-Reach 850-nm VCSELs
- Standard 1x12 MT optical interface
- 12 Differential CML Inputs/Outputs
- Amphenol/FCI MegArray™ Connector
- Footprints of 17-mm x 17-mm
- Link Distance up to 100-m (OM3 fiber)
- I2C communication interface
- Asynchronous channel operation
- Data protocol agnostic with balanced-code
- Tin-Lead or RoHS options



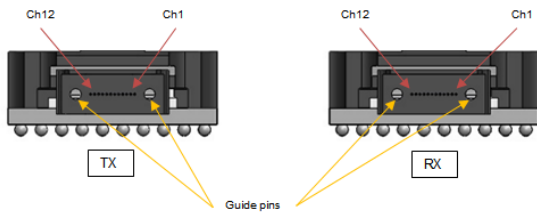
Reflex 12 x 10G LightABLE™ LH Transmitter & Receiver

Applications:

The LH SR12 module targets applications that require very large bandwidths in confined areas and are typically co-located with high-speed, high port count FPGAs or ASICs. The modules provide robust operation and high operating temperature ranges. Typically the modules are used in:

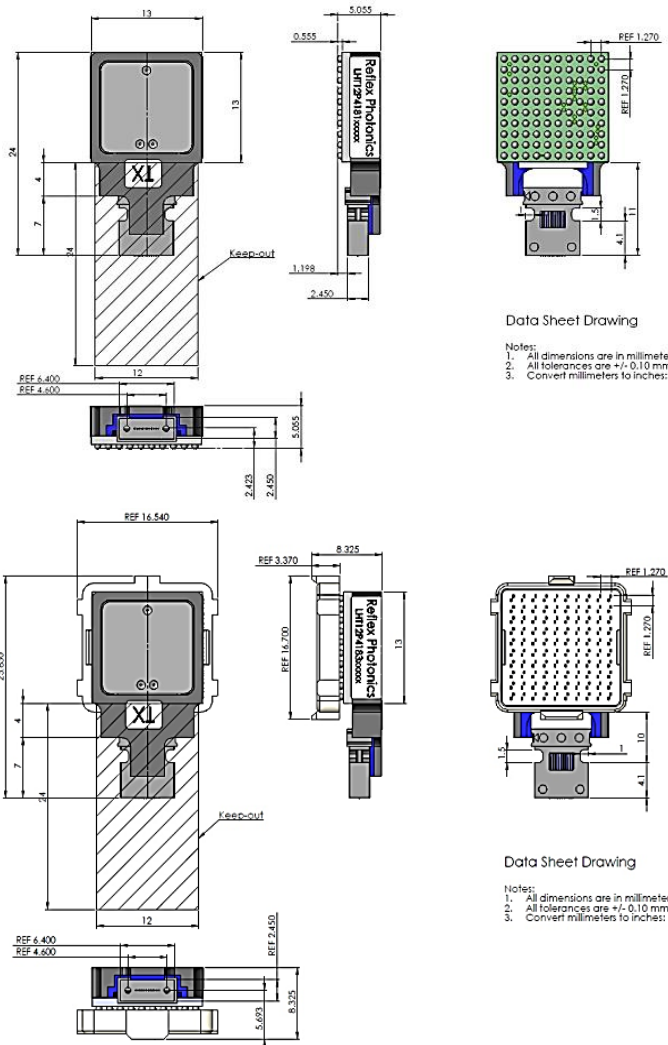
- Phased array radars
- FPGA Serdes Interfaces
- Multi-processor interconnects
- CCD/CMOS Imaging sensor arrays
- High fidelity radar imagery

Optical Interface Lanes:



*Outside view of the LightABLE™ LH module MT receptacles*

Mechanical



Data Sheet Drawing

- Notes:
1. All dimensions are in millimeters
  2. All tolerances are +/- 0.10 mm (unless otherwise stated)
  3. Convert millimeters to inches: 25.4mm = 1 inch

Data Sheet Drawing

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Transmitter and Receiver engines mechanical outline are the same.

**PRODUCT VARIANTS**

LightABLE™ LH SR12 transmitters and receivers are available in several operating temperature variants

- Industrial Operating Temperature Range (-40 to +85°C) (Tcase)
- Commercial Operating Temperature Range (0 to +70°C) (Tcase)

Each temperature variant is available in mounting options of

- Surface mount: Pb / Leaded solder balls
- Pluggable: RoHS / Lead-Free MegArray® connector

**1-514-842-5179 or 1-408-715-1781** or by email at [sales@reflexphotonics.com](mailto:sales@reflexphotonics.com)