

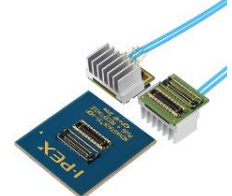




# LIGHTPASS® Series Optical module

**LK** Mechanical Lock  
**105°C** **100°C** Operating temperature

Click the photos below to get more detailed product information.

Product name	LIGHTPASS®-EOB II 128G	LIGHTPASS®-EOS 100G	LIGHTPASS®-EOM 100G	LIGHTPASS®-SP-Q28 100G	LIGHTPASS®-EOB 100G
Feature	 <b>105°C</b> <b>LK</b>			 <b>100°C</b>	 <b>LK</b>
	High –Speed 128Gbps & High Operating Temperature	Narrow type & Support Autoclave	Small size	High Operating Temperature	Ultra-Thin Mating Height
Optical Module P/N	T230035-0002	T230170-001	88001-000T-25-01	-	88002-000T-25-01
Receptacle P/N	T220250-0601	21004-060E	21001-042E-01	-	20525-260E-02
MCU (Micro Controller Unit)	With	With	Without *1	With	With
Electrical Interface	Horizontal 0.4mm pitch 30pin 2row	Vertical 0.35mm pitch 60pin	Vertical 0.35mm pitch 42pin x2	Horizontal QSFP28	Horizontal 0.4mm pitch 60pin
Mated size(W,D,H) [mm]	18.6 x 36.3 x 3.8	8.4 x 34.8 x 4.6	14.0 x 12.0 x 8.6	18.35 x 89.4 x 8.5	29.01 x 29.75 x 2.3
Channel Capacity	128Gbps 32Gbps x 4ch	100Gbps 25Gbps x 4ch	100Gbps 25Gbps x 4ch	112Gbps 28Gbps x 4ch	100Gbps 25Gbps x 4ch
Operating Case/Temp. (Tc[°C])	-40~85(105)	-40~85	-40~85	-40~85(100)	-40~85
Power Consumption [W]	Nom 4.0	Nom 3.0	Nom 3.0	Nom 4.0	Nom 4.0
Power Sources	Single source 3,3V	Single source 3,3V	5 sources (3.3V + 4 types 0.9V)	Single source 3,3V	3 sources (3.3V + 2 types 0.9V,1.0V)
Wavelength	1,310nm				
Applicable Fiber	MMF 50/125µm				
Status	Samples available	Samples available	Samples available	Samples available	Samples available

\*1 MCU functionally to control the I/O core is required on the customer's board

# LIGHTPASS® Series Product Overview

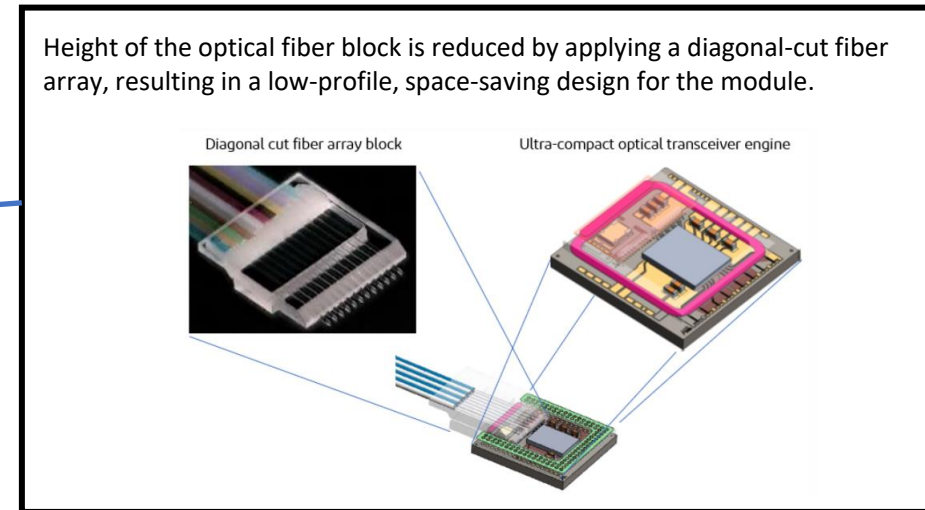
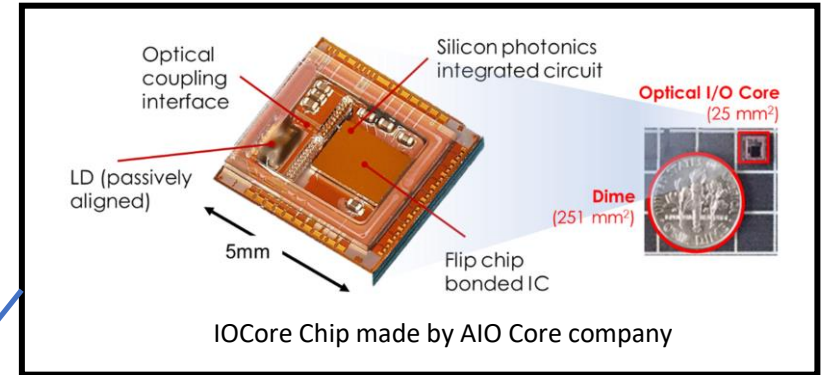
The LIGHTPASS® series from I-PEX is a multi-mode active optical module with a silicon photonics IC "IOCore™" which was developed by AIO Core Co., Ltd. that can operate stably in high temperature environments. These products enable bi-directional optical communication for the purpose of photoelectric conversion of internal high-speed signals in large data equipment and telecommunication equipment.

## <IOCore Chip Overview from AIO Core Co.,Ltd>

- The optical I/O core consists of a Laser Diode(LD), a driver for an optical modulator, a PD(Photo Detector)/TIA/receive amplifier, and so on, all integrated into a 5mm sq chip. All in one optical transceiver chip.
- Optical transceiver chip uses "silicon photonics technology" to form optical elements on a silicon substrate.
- The light source is a quantum dot laser (QD-LD) that can maintain high power even in high temperature operation.

## <LIGHTPASS® Series Feature>

- 4 channels each for transmitting/receiving
- Channel Capacity
  - EOB II · · · 128Gbps (NRZ 32G × 4 c h)
  - EOS, EOM, SP Q28 · · · 100Gbps (NRZ 25G × 4 c h)
- MMF Wavelength 1,310nm
- Designed for heat dissipation
  - EOB II, SP Q28 · · · Operating Case/Temperature -40~85°C (105°C)



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## LIGHTPASS<sup>®</sup> Series

Optical Modules



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