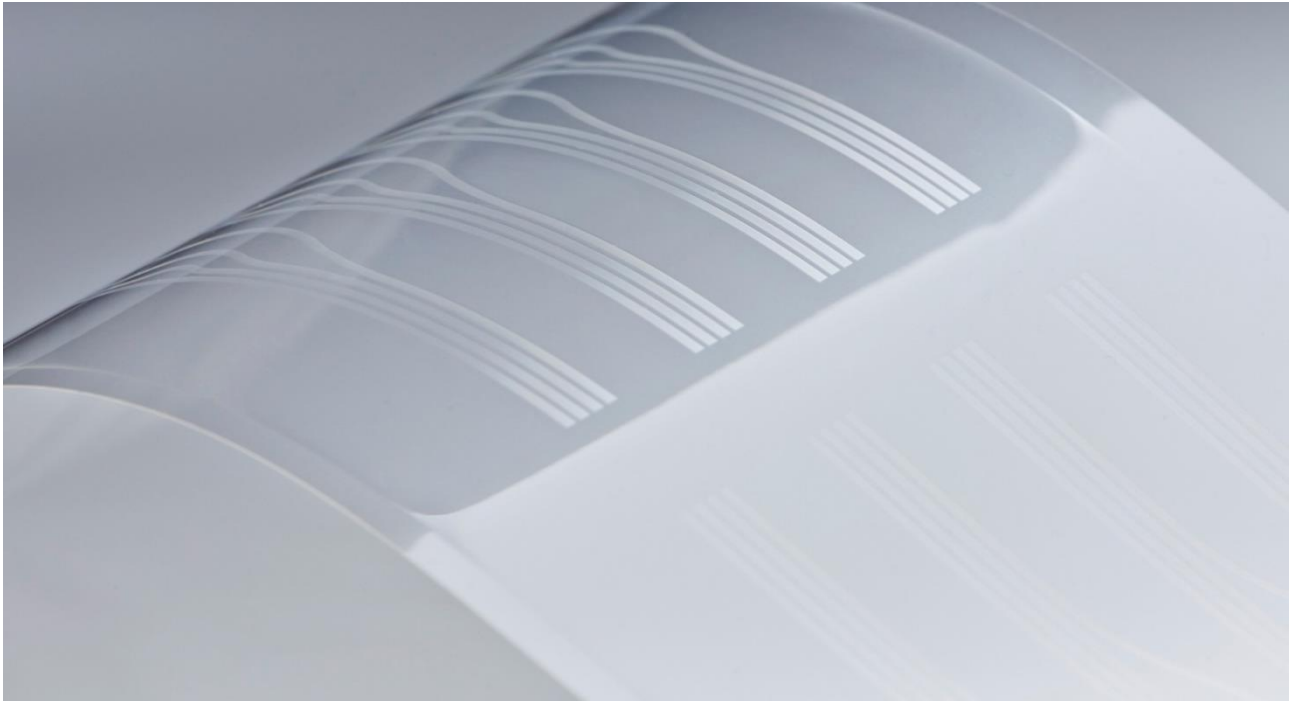
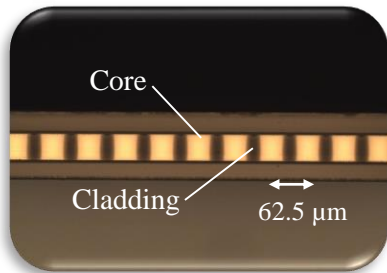


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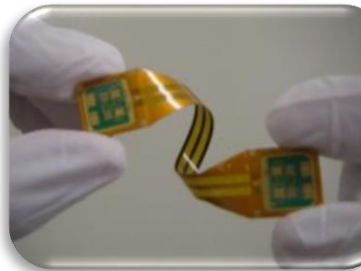
## Polymer waveguide



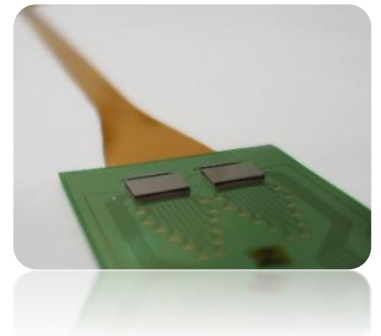
**High density  
pattern**



**Flexible  
structure**

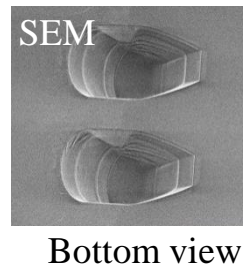
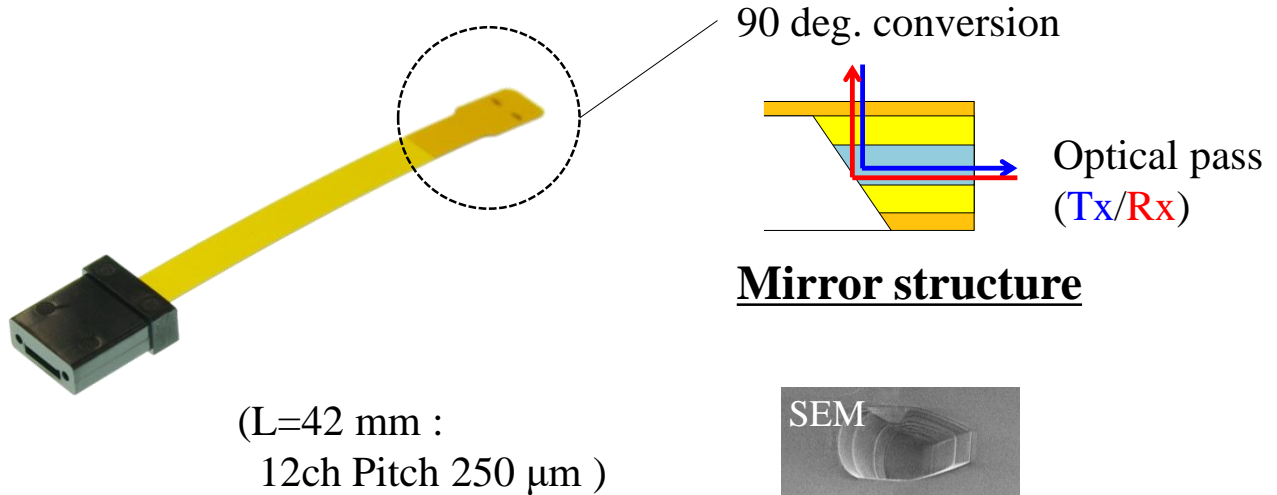


**Easy  
assembly**



# Type 1 - Mirror / Connector

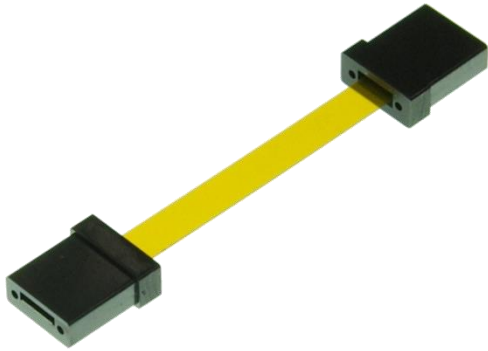
## (Polymer waveguide Type-1)



## Technical data

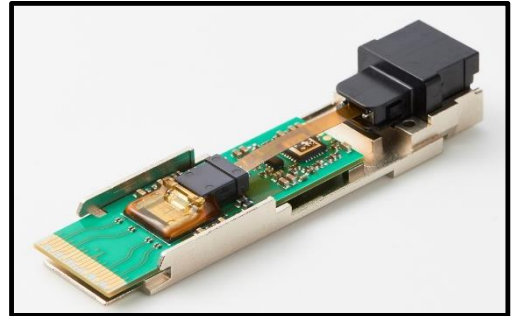
Parameters	Values
Insertion loss /Connector: MT coupling /Mirror: active alignment /GI50-MMF	$< 3.5$ dB (Tx/Rx) (Typ. 3.0 dB)
Numerical aperture /Connector side	0.28 (horizontal) 0.32 (vertical)
Inter-channel crosstalk	$< -40$ dB
Bending loss @ R = 5 mm	Stable ( $< 0.5$ dB)
Connection durability ( after 100 times)	Stable ( $< 0.5$ dB)

# Type 2 - Both side Connector (Polymer waveguide Type-2)



(L=40 mm :  
12ch Pitch 250 μm )

Usage example  
For optical transceiver

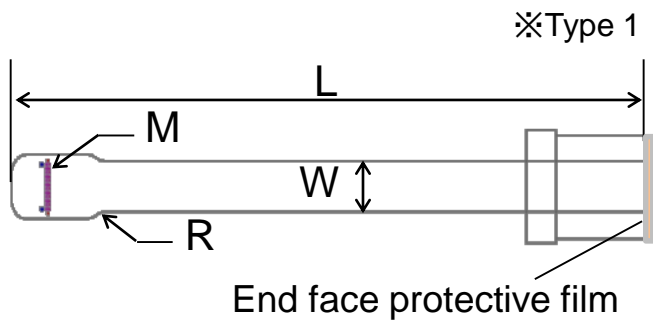


## Technical data

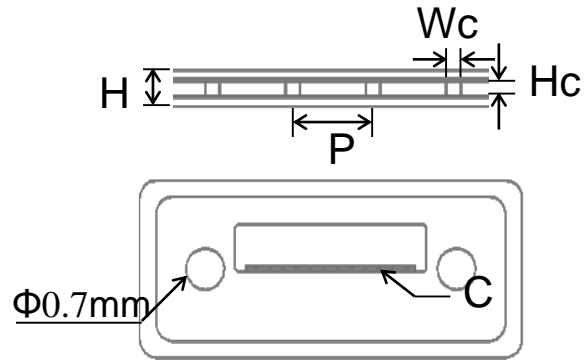
Parameters	Values
Insertion loss /Both end : MT-MT	1.5 dB (Typ. 1.0 dB)
Numerical aperture	0.28 (horizontal) 0.32 (vertical)
Inter-channel crosstalk	< -40 dB
Bending loss @ R=5 mm	Stable (< 0.5 dB)
Connection durability (after 100 times)	Stable (< 0.5 dB)

# External dimensions

## Top view



## Cross sectional view



### Parameters

### Values

(L) Waveguide length	42 mm
(W) Waveguide width	3.1 mm
(M) Mirror position accuracy * with reference to alignment mark	$\pm 5 \mu\text{m}$
(R) Radius of curvature	1 mm

### Parameters

### Values

(H) Waveguide thickness	104 $\mu\text{m}$
(Hc) Core thickness	42 $\mu\text{m}$
(Wc) Core width	48 $\mu\text{m}$
(P) Core pitch	250 $\mu\text{m}$
(C) Core position accuracy *with reference to pin-hole	$\pm 5 \mu\text{m}$

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