

# 1Gbps Optical Connector with Cable ASSY



Automobile optical connector with cable ASSY that makes high-speed optical communication system achievable

### Background or Challenges

- Supports automotive high-speed communication for autonomous driving (data transmission between main ECUs)
- Manages noise and electrical insulation to meet vehicle electrification requirements
- Contributes to carbon neutrality by reducing weight

### Solutions to Challenges or Features

- 1
- Reduces the weight and improves noise resistance performance by using plastic optical fibers (Shielded wire ratio volume 1/4)
- 2
- Ensures high reliability in on-board environments by using plastic optical fibers
- 3
- 70% smaller than conventional MOST connectors

### Main performance, specifications/stucture

|                       |   |
|-----------------------|---|
| Application case      | Gigabit Ethernet                          |
| Data rate speed       | Up to 1Gbps                               |
| Light source          | LED                                       |
| Optical fiber         | SI-POF (Step Index Plastic Optical Fiber) |
| Operating temperature | Connector: -40°C to +105°C                |
|                       | Optical fiber: -40°C to +90°C             |
| PCB connector mass    | 4.7g                                      |
| PCB connector size    | 20.1(W) × 22.8(D) × 12.1(H)mm             |
| Modulation system     | Multivalued                               |
| Power supply voltage  | 3.3V±5%                                   |
| Transmission distance | Up to 40m                                 |
| PCB mounting          | Through hole reflow/SMT                   |

