

MediSpec Hybrid OptoMiX Connectors

MediSpec Hybrid OptoMiX Connectors deliver optical and electrical connections by using a simplified system design with optical and electrical connectivity in one connector, offering customized capabilities for combined data, signal and power connectivity in a wide range of medical applications.



ADVANTAGES AND FEATURES

Reduces cable assembly and panel requirements for equipment installations

by combining optical and electrical connectivity in a single package

Permits power and signal capabilities to be customized based on the specific application requirements

by using a configurable electrical insert with a customizable power and signal-pin layout to enable optimized performance

Minimizes space needed on the equipment panel

through a miniaturized connection solution that enables a small footprint, supporting high-density optical connectivity for next-generation data rates

Connector Housing (Shell)	Junior: circular 18.00mm Senior: circular 22.00mm
Optical Interface	Duplex 1.25mm, MT, VersaBeam, Duplex POF
Signal Contacts	Junior: 22 to 26 AWG (up to 12) Senior: 22 to 26 AWG (up to 16)
Power Contacts	Junior: 14 to 20 AWG (up to 5) Senior: 14 to 20 AWG (up to 12)

Delivers robust reliability in demanding medical environments

as these connector components use metal or medical-grade plastic

Offers simplified end-to-end connection system design

with available circular-to-custom breakouts and various jack options to provide a complete suite of solutions

Supports low data rate applications with low-cost plastic optical fiber (POF) options

that enable cost-effective use with LED lighting and low-level communication applications

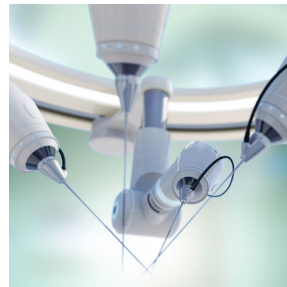
MARKETS AND APPLICATIONS

Medical

- Robotic surgery devices
- High-resolution imaging systems
- Diagnostic and surgical illumination equipment
- Imaging equipment
- Patient monitoring systems
- Therapeutic and surgical equipment



High-Resolution Imaging Systems



Robotic Surgery Devices



Diagnostic and Surgical Illumination Equipment

MediSpec Hybrid OptoMiX Connectors

SPECIFICATIONS

Reference Information

Packaging: Bag
Designed In: Millimeters
UL File No.: Plastic resin is rated to UL-94V0
Mates With: Circular hybrid receptacles,
either plastic or metal
RoHS: Yes
Halogen Free: Yes
Glow Wire Capable: Yes

Electrical

Copper Contacts:
Voltage (max.) – estimated 1,800 to 2,500V AC;
number of contacts and contact spacing will
determine V AC per design
Current (max.) – 4.0A per pin (22 to 26 AWG) or
12.0A per pin (14 to 20 AWG)

Optical

Insertion Loss:
MT Ferrule – 0.75 dB
Ceramic Ferrule – 0.35 dB
POF Ferrule – 0.75 dB (typ.)/1.40 dB (max.)
Return Loss:
MT Ferrule – 20 dB
Ceramic Ferrule – 55 dB
POF Ferrule – N/A

Physical

Housing:
Metal Circular – Nickel-plated Aluminum
Plastic Circular – Engineering-grade polymer
Optical Ferrule: PPS plastic (optional lens)
Optical Contacts: Ceramic or POF
Electrical Contacts: Copper Alloy
Signal Contacts (22 to 26 AWG):
MediSpec Hybrid OptoMiX Connector Junior
– Up to 12
MediSpec Hybrid OptoMiX Connector Senior
– Up to 16
Power Contacts (14 to 20 AWG):
MediSpec Hybrid OptoMiX Connector Junior
– Up to 5
MediSpec Hybrid OptoMiX Connector Senior
– Up to 12
Connector Shell Durability (max.): Up to 5,000
mating cycles
Operating Temperatures:
VersaBeam Interface: -5 to +60°C
MT, 1.25 Ceramic Interfaces: -40 to +85°C
Cable: Varies by application and cable type

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