

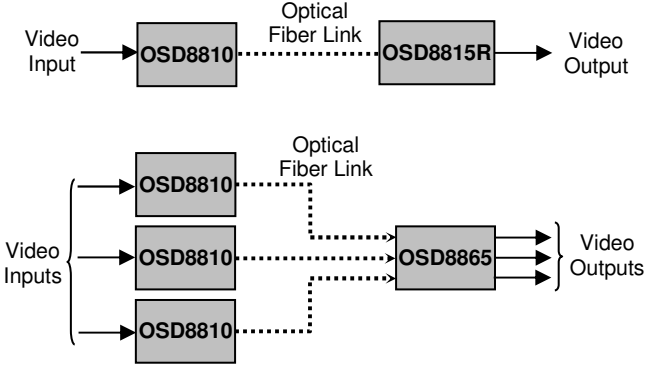
**OPERATOR MANUAL**  
**OSD8810**  
**Digital Single Channel Micro**  
**Video Transmitter**

The OSD8810 fiber optic video transmitter is designed to provide wideband CCTV quality video over up to 3km of multimode optical fiber or at least 30km of singlemode fiber with 100km optionally possible. Its major feature compared to other digital transmitters is its small size, just 25mm x 40mm elliptical diameter x 38mm long. It also fits directly onto the BNC connector of the camera. It operates with the OSD8815, OSD8865 digital video receivers.

**Specifications and Features**

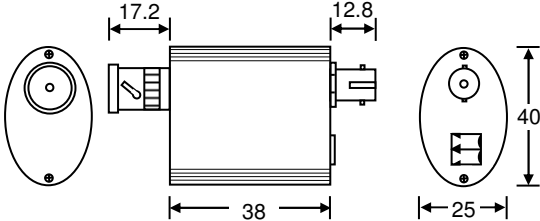
- ▲ Surveillance links up to over 100km
- ▲ Industrial process monitoring
- ▲ Safe city CCTV system video transmission
- ▲ Broadcast links
- ▲ Extends wideband video transmission to over 3km of multimode fiber and at least 30km of singlemode fiber with 100km optionally possible
- ▲ Performance is maintained at the same quality over all link lengths
- ▲ Fits directly onto the camera
- ▲ Eliminates length dependant adjustments often required with coax or Cat 5 based systems
- ▲ More secure than coaxial or Cat 5 cables
- ▲ Broadcast quality true 10 bit video with 10MHz bandwidth
- ▲ Operates with the OSD8815R and OSD8865 digital receivers
- ▲ Two audio channels are optionally available

**Typical Configurations**



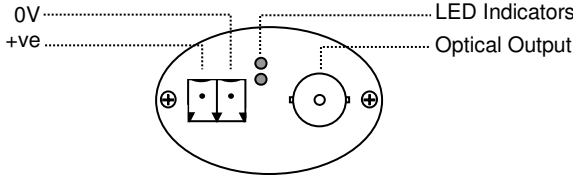
**Mounting Details**

The OSD8810 can be mounted directly on the back of a camera to the female BNC connector. Below is an outer case drawing showing the dimensions.



**Power Connection**

The OSD8810 requires external DC or AC power. The acceptable DC voltage range is +9 to +35V<sub>DC</sub>, and the allowed AC voltage range is 22 to 28V<sub>AC</sub>, @ 1.5VA. Power should be connected to the 3.5mm 2-way terminal block located at the side of the case. Take care to connect DC power with the correct polarity as shown below. A 3.5mm 2-way terminal plug is supplied with the OSD8810.

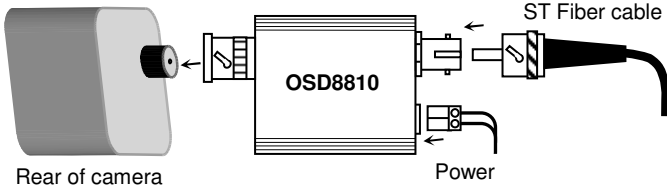


**Signal Connection**

Video input signal should be connected to the male BNC connector on the OSD8810 directly from the camera.

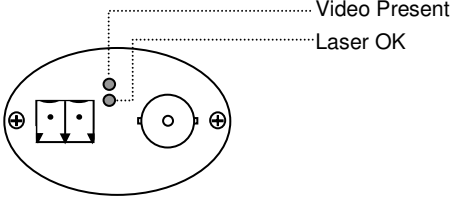
The optical fiber cable must be terminated with the appropriate ST type optical connector. Before connection, inspect the ends of the connectors to ensure that no dust or dirt is present as it could contaminate the modern connector and result in poor performance.

If it is necessary to clean the cable connectors use isopropyl alcohol and lint free tissue to remove contamination.

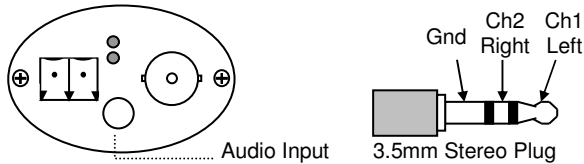


**LED INDICATORS**

Indicator	Colour	Function
Video Present	Blue	Video signal connected
	Off	No video signal present
Laser OK	Green	Laser in normal operation
	Red	Laser Fail/No optical output



## Optional Audio Version Connections



## Technical Specifications

Specification	Performance
Input Impedance	75Ω
Input Level	1Vp-p nominal
Video Connector	BNC Plug
Power Connector	3.5mm 2-way terminal block
Bandwidth	5Hz to 10MHz +1/-3dB
Weighted Signal to Noise Ratio	>65dB when operating with the OSD8815R or OSD8865
Diff Gain/Phase	<0.7%, <0.7°
Audio BW	15Hz to 20KHz +1, -3dB
Audio Input Impedance	>10KΩ/200Ω
Audio Input Level	200mVrms
Audio Headroom	15dB
Audio Weighted SNR	>90dB at maximum level
Audio Distortion	<0.02%
Audio Connector	3.5mm Stereo Socket
Transmitter Wavelength	1310nm ± 40nm
Transmitter Coupled Power	-15 to -10dBm into singlemode fiber -10 to -5dBm into multimode fiber
Optical Connectors	ST
Power Requirements	+9 to +35V <sub>DC</sub> 22 to 28V <sub>AC</sub> @ 1.5VA
Enclosure	Elliptical Extrusion
Dimensions (mm)	25 x 40 x 38L (excluding connectors)
Weight of Module	50g
Operating Temperature	-40 to 75°C
Relative Humidity	0 to 95% non-condensing

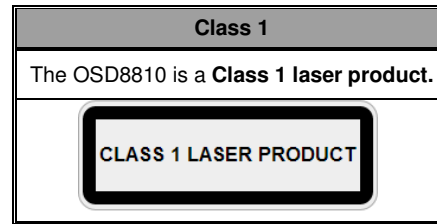
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### ▲ ELECTROMAGNETIC COMPATIBILITY

**WARNING:** This is a Class A product. In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.

### ▲ OPTICAL OUTPUT OPERATION

**WARNING: Laser Safety:** Class 1 Laser Product per IEC/EN 60825-1:20011 standard.



### Precautions

- ▲ All service personnel should be provided training as to the hazards of direct viewing of laser radiation and of the precautionary measures during servicing of equipment
- ▲ Areas where laser products are installed should be restricted in access to trained service personnel only and appropriate warning signs posted in the work area.
- ▲ All laser apertures should be covered by protective covers when not connected to optical fibers. Never leave outputs uncovered.
- ▲ Laser equipment should be positioned above or below eye level where possible. Apertures should be positioned away from personnel.
- ▲ Protective eyewear should be worn in the vicinity of laser equipment

### Maintenance

This equipment has been fully tested prior to dispatch and is ready for immediate operation. However it is advisable to check for external transportation damage before operation. If damage is evident, return the unit with the packaging to your supplier immediately.

Visually check for the following:

- ▲ Check that the correct power source is connected to the power socket.
- ▲ Check that the video signal is connected to the modem correctly and that the distant modem has been terminated correctly to any external equipment.
- ▲ Inspect the optical connector for any contamination and clean using isopropyl alcohol and a lint free tissue if any contamination is detected.
- ▲ Check that any external terminations are connected if the system configuration requires them.

### Warranty/Repairs

Thank you for purchasing equipment designed, manufactured and serviced by Optical Systems Design (OSD). OSD warrants that at the time of shipment, its products are free from defects in material and workmanship and conforms to specifications.

For warranty period and repair service please call your local OSD distributor.

Optical Systems Design reserves the right to repair or replace faulty modules/units. Should your unit be faulty, please obtain a "Return Material Authorisation" (RMA) form and number before returning goods.

Goods must be returned in adequate packing material to Optical Systems Design, Warriewood or its nominated authorised representative, for all repairs.

This warranty does not apply to defects caused by unauthorized modifications, misuse, abuse or transport damage to the equipment. All modifications to OSD's standard product will need written authorization and will be charged at normal repair rates. All modifications are to be carried out by OSD Technicians. Warranty is void if unauthorized removal and/or tampering with serial number and/or repair labels is evident.



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