

S3SDI-D31-SP-LR-D

3 Gbps video SDI SFP transceiver

Description:

3G-SDI Video SFP Optical Transceiver Module is a high-performance, cost-effective 3G-SDI optical transceiver module for broadcast video transmission applications over single-mode fiber (SMF). It provides data rates from 270 Mbps to 2.97 Gbps and is specifically designed for robust performance in the presence of SDI pathological patterns for SMPTE 259M, SMPTE 344M, SMPTE 292M, and SMPTE 424M serial rates. It provides the maximum transmission distance of 20km over single mode fiber at 3 Gbps pathological signals. The Pin definition of OHP3G-3110DCR is MSA compliant.

S3SDI-D31-SP-LR-D provides extensive operational status monitoring (also called DDM) through an I2C interface. Output optical power, bias current, supply voltage and operating temperature are monitored. If a parameter monitored is outside the pre-defined range, the alarm flag associated with the parameter will be raised. The 3G SDI video SFP module is Class I Laser products per FDA/CDRH and IEC-60825 standards.



Features:

- Universal Video SFP Transceiver
- Speed from 270 Mbit/s up to 2.97 Gbps
- Metal enclosure for Lower EMI
- Hot-pluggable SFP footprint
- 1310 nm DFB laser transmitter
- Support video pathological patterns for SD-SDI, HD-SDI, 3G-SDI
- 3G SDI protocol support for broadcasting applications
- Duplex LC connector interface
- Digital Diagnostic Monitoring (DDM)
- Case operating temperature range: 0°C to 70°C
- Single 3.3 V power supply

Standards:

- Compliant with SFF-8472 standards, duplex LC connector
- Compliant with SFP MSA
- RoHS Compliant (lead free)

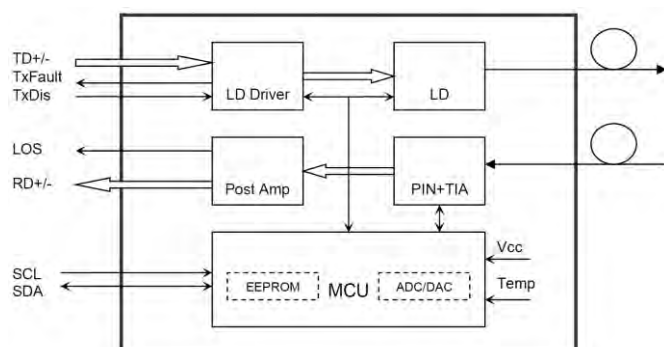
Applications:

- High-density digital video routers & switches
- HD Camera or Monitor System
- 3G-SDI/HD-SDI/SD-SDI Electrical-Optical and Optical-Electrical Converter

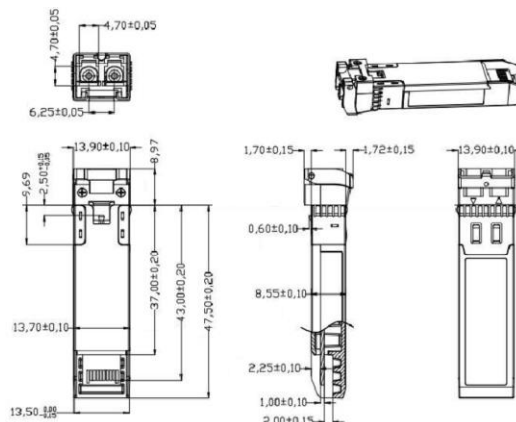
Recommended operating conditions:

Parameter	Symbol	Unit	Min.	Max.
Operating Case Temperature	T _c	°C	0	+70
Power Supply Voltage	V _{cc}	V	3.13	3.47
Power Supply Current	I _{cc}	mA		400
Data Rate	P	Mbps	270	2970

Module block diagram:



Mechanical dimension:



Optical specifications:

Transmitter						
Parameter	Symbol	Min.	Typical	Max.	Unit	Notes
Center Wavelength Range	λ_c	1260	1310	1360	nm	
Average Output Power	Pout	-6	-2	0	dBm	1
Single Mode Suppression Ratio	SMSR	30			dB	
Spectral Width (-20dB)	λ_{20}			1	nm	
Receiver						
Center Wavelength Range	λ_c	1260		1580	nm	
Receiver Sensitivity	Pout			-18	dBm	2
Receiver Overload		-3			dBm	2
LOS De-Assert	LOS _D			-20	dBm	
LOS Assert	LOS _A	-30			dBm	

Note 1- The optical power is launched into SMF

Note 2- Measured with a PRBS 223-1 test pattern @2488Mbps, BER $\leq 1 \times 10^{-12}$

Ordering code:

Part number	Description
S3SDI-D31-SP-LR-D	3 Gbps, SDI video SFP, 1310 nm, distance 20 km over SM, duplex LC connector, 0°C to +70°C

Class I Laser products per FDA/CDRH and IEC-60825 standards

