

# OKI Electronic Components

**FEDFOAT1509-01**

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## OAT1509-LV-CB/LB

**Optical Service Channel Transceiver**

### APPLICATION

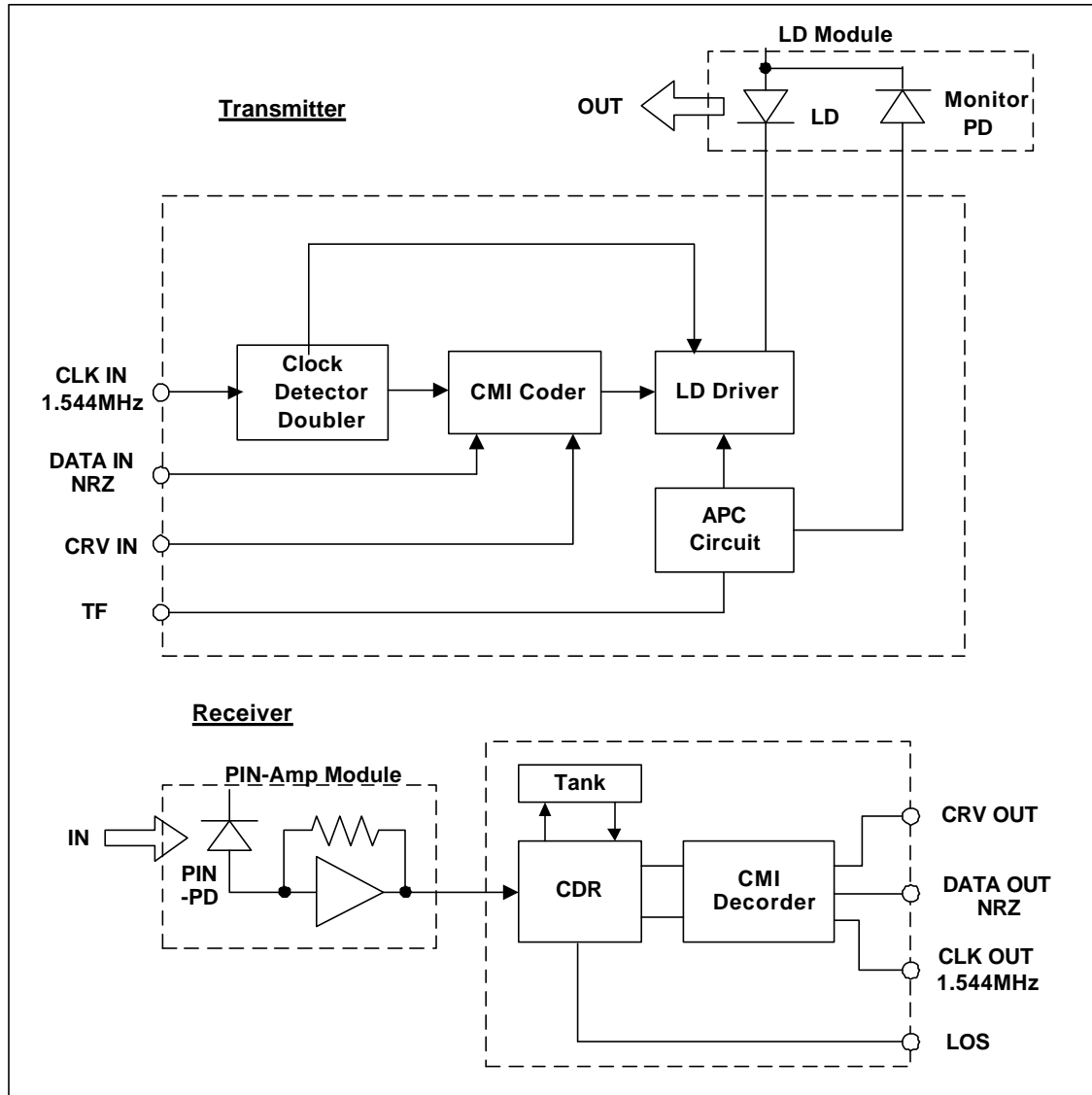
- DWDM Optical Service Channel Transmitter operated by T1 1.544Mbps

### FEATURES

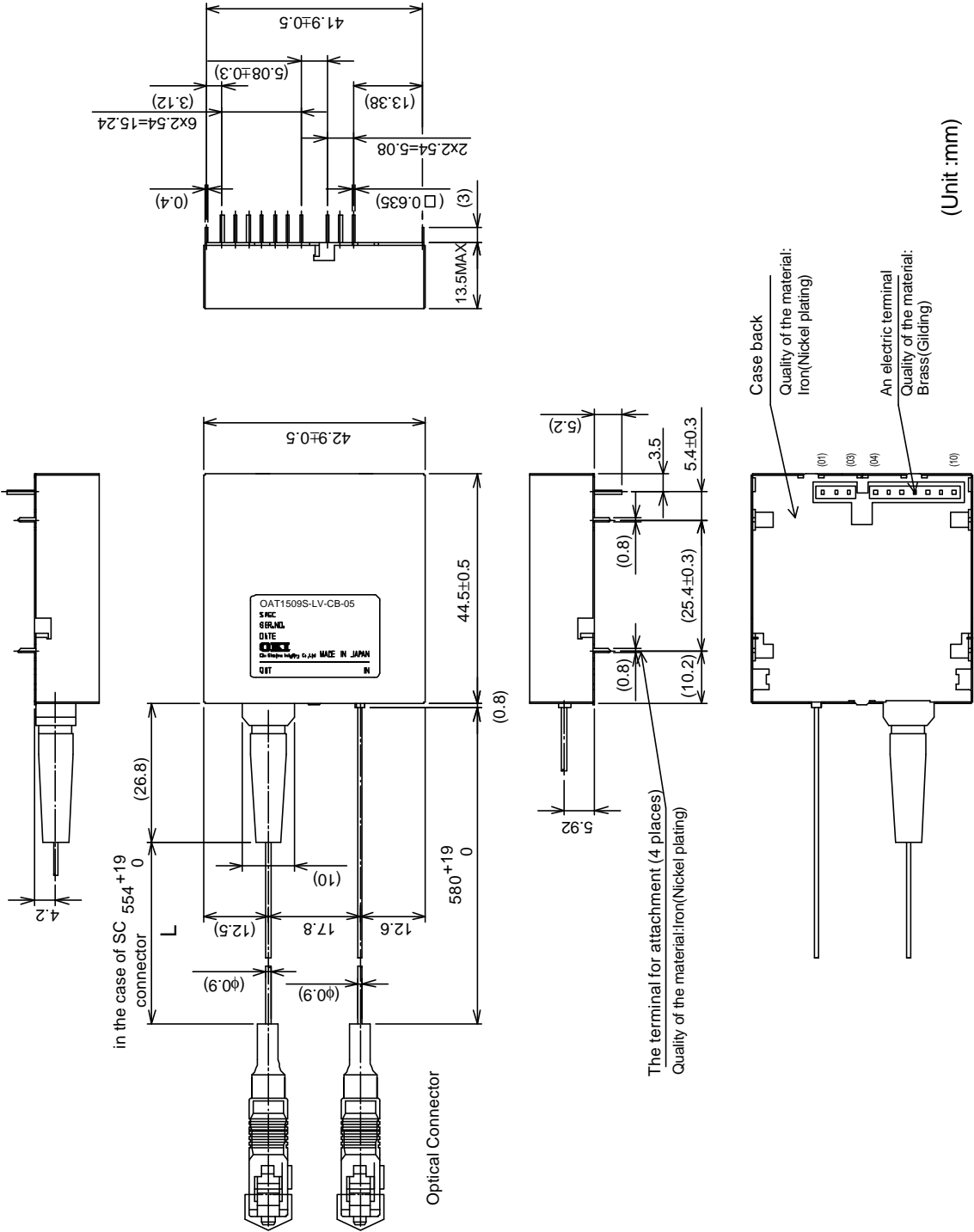
- Integrated NRZ to/from CMI code/Decode functions
- TTL compatible interface
- Operation at 1.51 $\mu$ m/1.625 $\mu$ m wavelength(C-band / L-Band) by Uncooled DFB-LD
- High output power > 0dBm and High sensitivity < -44dBm for Long haul transmission
- Integrated CDR function
- +3.3V single power supply and Low power consumption 0.6W

### SPECIFICATION

Parameter	Unit	OAT1509-LV-CB	OAT1509-LV-LB
Type		C-band	L-band
Bit rate	Mbps	1.544	
Line code	-	CMI	
Operating wavelength	nm	1510 $\pm$ 7	1625 $\pm$ 7
Mean launched power range	dBm	-3 to +3	
Minimum extinction ratio	dB	$\geq$ 13	
Received optical power [BER = 10 <sup>-8</sup> ]	dBm	-44 to -8	
Power consumption	W	0.6 (Typ.)	
Laser diode		1.510 $\mu$ m DFB-LD	1.625 $\mu$ m DFB-LD
Fiber type		Single mode fiber	
Power supply voltage	V	+3.3 $\pm$ 5%	
Operating temperature	°C	0 to 60	
Dimension	mm	42.9 x 44.5 x 13.5	

**BLOCK DIAGRAM**

PACKAGE OUTLINE



**PIN DESCRIPTIONS**

No.	Symbol	Functionality
01	GND	Ground
02	Vcc	Power supply (Vcc = +3.3 V)
03	LOS	Los of incoming signal <LVTTTL> A logic high on LOS indicates the absence of a signal
04	CLK OUT	Negative clock output <LVTTTL>
05	DATA OUT	Positive NZR data output <LVTTTL>
06	CRV OUT	Code Rule Violation output <LVTTTL>
07	TF	Transmit fail alarm output <LVTTTL>
08	CLK IN	Positive clock input <LVTTTL>
09	DATA IN	Positive NRZ data input <LVTTTL>
10	CVR IN	Code Rule Violation signal input <LVTTTL>

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9. **Qualification and Reliability**  
To help ensure high product reliability and customer satisfaction, OKI is committed to an intensive quality program that starts in the design phase and proceeds through the manufacturing process. Optical transceiver modules are qualified to OKI internal standards using MIL-STD-883 test methods and procedures and using sample techniques consistent with Telcordia requirements. This qualification program fully meets the intent of Telcordia reliability practices GR-468-CORE.
10. **Laser Safety**  
All version of transceiver are Class 1 Laser products FDA complies with 21 CFR 1040.10 and 1040.11 requirements.  
Also, all versions are Class 1 Laser products pre IEC 825-1.

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