

**APPLICATION**

- OC-192 and STM-64 SERDES Transceiver Module for CWDM type1

**FEATURES**

- Transmission Distance 40km(Dispersion 800ps/nm)
- Wavelength 1550nm WDM
- Wavelength stability +/-25GHz
- Minimum sensitivity <-22dBm
- 1:16 DeMUX with LVDS differential 622Mbps data outputs
- 16:1 MUX with LVDS differential 622Mbps data inputs
- TX/RX Loss of Lock
- Compact size
- Supply voltage; +3.3V and -5.2V

**SPECIFICATION**

- **Optical interface specifications**

Parts Number	OAT1046x-V3-z-yy	Units
Parameter	For CWDM type1	
<b>Transmitter module</b>		
Pout	-3 to +0	dBm
$\lambda_c$	1530 to 1565	nm
Optical output waveform	ITU- T G.691 STM- 64 Unamplified Mask standard	
Extinction ratio	8.2	dB
$\Delta\lambda_{20}$	1.0	nm
SMSR	30	dB
Jitter Generation	Compliant with GR-253	
<b>Receiver Module</b>		
Minimum sensitivity	-22	dBm
Minimum overload	-5(Note1)	dBm
$\lambda_{c\_rx}$	1290 ~ 1600	nm
Rx Return loss	27	dB
Jitter Generation, Tolerance and Transfer	Compliant with GR-253	
<b>Optical path</b>		
$D_{LRmax}$	800	ps/nm
System Optical return loss	24	dB
Optical Path Penalty	2	dB

## · Power Supply

Parameter	Symbol	Min.	Typ.	Max.	Units	I <sub>max</sub>
Supply Voltage	V <sub>dd</sub>	3.13	3.3	3.47	V	2.5A
	V <sub>ee</sub>	-4.94	-5.2	-5.45	V	0.6A
Power consumption			8	11	W	

· **Operating Temperature(Case temperature)**

0 to 65 degC

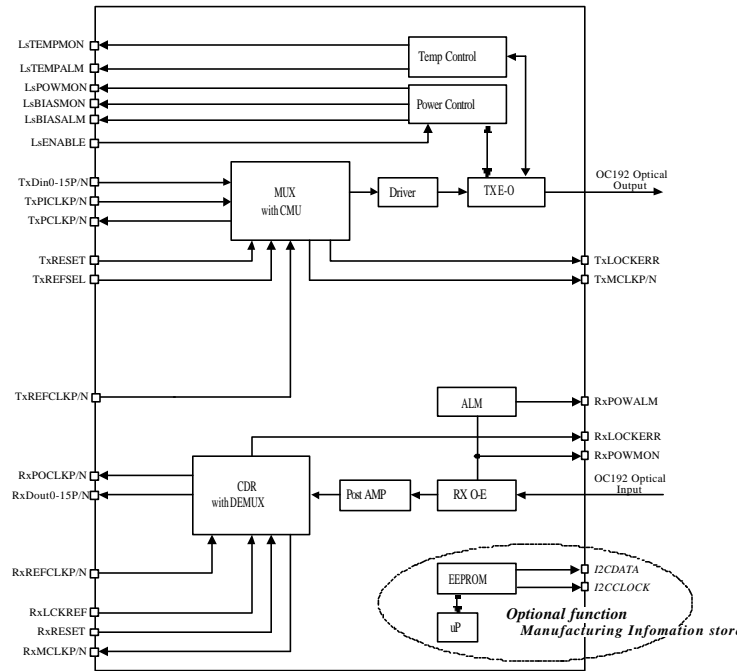
## · Dimensions(without heat sink)

	Dimensions	Units
Width	88.9	mm
Length	114.3	
Height	13	

## · Connector

Optical	Select SC / FC / LC / MU
Electrical	300pin BERG MegArray@84502-10X

**BLOCK DIAGRAM**

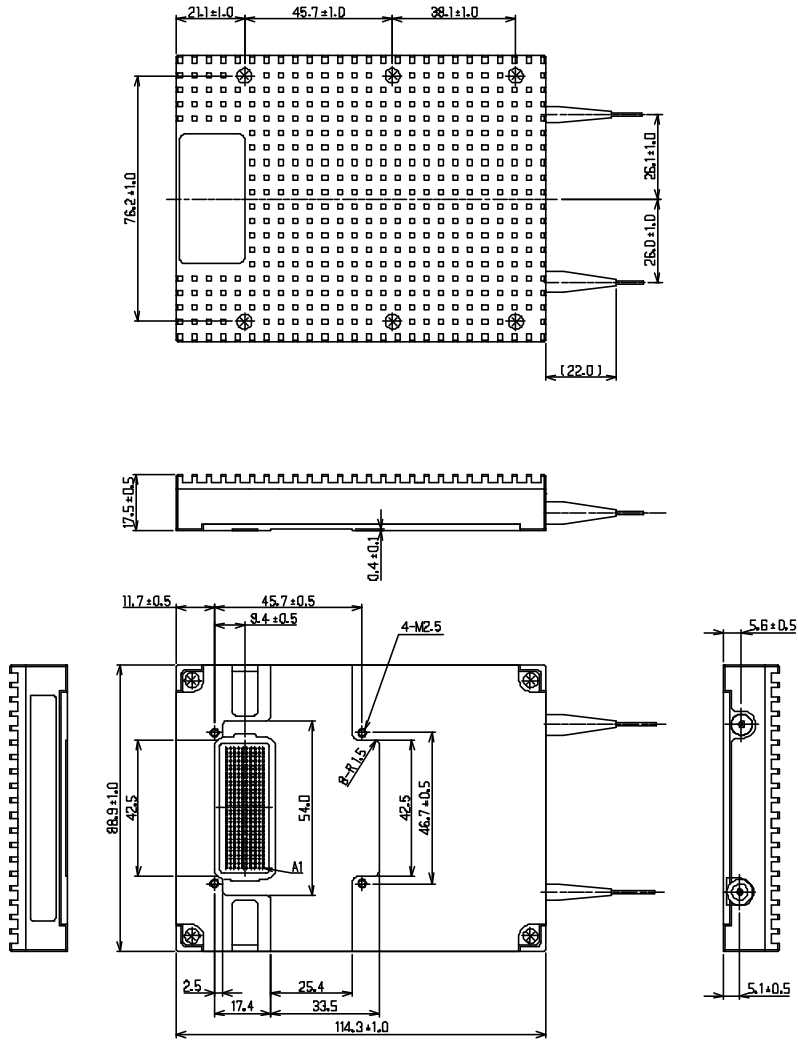


**ORDERING INFORMATION**  
OAT1046x-V3-z-yy-ww

<b>x</b>		<b>z</b>		<b>yy</b>		<b>ww</b>
optical connector		Bitrate(Gbps)		Fiber Length		<b>Wavelength</b>
S	SC	A	9.95	10	1m	Table 1
F	FC	B	10.3	05	0.5m	
L	LC	C	9.95/10.3/10.7			
M	MU	D	10.7			

PACKAGE OUTLINE

(Unit: mm)



**Table 1 Wavelength Lineup**

ww	Model Name	Wavelength	ww	Model Name	Wavelength
01	OAT1046x-z-yy-01	1529.94	45	OAT1046x-z-yy-45	1547.32
02	OAT1046x-z-yy-02	1530.33	46	OAT1046x-z-yy-46	1547.72
03	OAT1046x-z-yy-03	1530.72	47	OAT1046x-z-yy-47	1548.11
04	OAT1046x-z-yy-04	1531.12	48	OAT1046x-z-yy-48	1548.51
05	OAT1046x-z-yy-05	1531.51	49	OAT1046x-z-yy-49	1548.91
06	OAT1046x-z-yy-06	1531.90	50	OAT1046x-z-yy-50	1549.32
07	OAT1046x-z-yy-07	1532.29	51	OAT1046x-z-yy-51	1549.72
08	OAT1046x-z-yy-08	1532.68	52	OAT1046x-z-yy-52	1550.12
09	OAT1046x-z-yy-09	1533.07	53	OAT1046x-z-yy-53	1550.52
10	OAT1046x-z-yy-10	1533.47	54	OAT1046x-z-yy-54	1550.92
11	OAT1046x-z-yy-11	1533.86	55	OAT1046x-z-yy-55	1551.32
12	OAT1046x-z-yy-12	1534.25	56	OAT1046x-z-yy-56	1551.72
13	OAT1046x-z-yy-13	1534.64	57	OAT1046x-z-yy-57	1552.12
14	OAT1046x-z-yy-14	1535.04	58	OAT1046x-z-yy-58	1552.52
15	OAT1046x-z-yy-15	1535.43	59	OAT1046x-z-yy-59	1552.93
16	OAT1046x-z-yy-16	1535.82	60	OAT1046x-z-yy-60	1553.33
17	OAT1046x-z-yy-17	1536.22	61	OAT1046x-z-yy-61	1553.73
18	OAT1046x-z-yy-18	1536.61	62	OAT1046x-z-yy-62	1554.13
19	OAT1046x-z-yy-19	1537.00	63	OAT1046x-z-yy-63	1554.54
20	OAT1046x-z-yy-20	1537.40	64	OAT1046x-z-yy-64	1554.94
21	OAT1046x-z-yy-21	1537.79	65	OAT1046x-z-yy-65	1555.34
22	OAT1046x-z-yy-22	1538.19	66	OAT1046x-z-yy-66	1555.75
23	OAT1046x-z-yy-23	1538.58	67	OAT1046x-z-yy-67	1556.15
24	OAT1046x-z-yy-24	1538.98	68	OAT1046x-z-yy-68	1556.55
25	OAT1046x-z-yy-25	1539.37	69	OAT1046x-z-yy-69	1556.96
26	OAT1046x-z-yy-26	1539.77	70	OAT1046x-z-yy-70	1557.36
27	OAT1046x-z-yy-27	1540.16	71	OAT1046x-z-yy-71	1557.77
28	OAT1046x-z-yy-28	1540.56	72	OAT1046x-z-yy-72	1558.17
29	OAT1046x-z-yy-29	1540.95	73	OAT1046x-z-yy-73	1558.58
30	OAT1046x-z-yy-30	1541.35	74	OAT1046x-z-yy-74	1558.98
31	OAT1046x-z-yy-31	1541.75	75	OAT1046x-z-yy-75	1559.39
32	OAT1046x-z-yy-32	1542.14	76	OAT1046x-z-yy-76	1559.79
33	OAT1046x-z-yy-33	1542.54	77	OAT1046x-z-yy-77	1560.20
34	OAT1046x-z-yy-34	1542.94	78	OAT1046x-z-yy-78	1560.61
35	OAT1046x-z-yy-35	1543.33	79	OAT1046x-z-yy-79	1561.01
36	OAT1046x-z-yy-36	1543.73	80	OAT1046x-z-yy-80	1561.42
37	OAT1046x-z-yy-37	1544.13	81	OAT1046x-z-yy-81	1561.83
38	OAT1046x-z-yy-38	1544.53	82	OAT1046x-z-yy-82	1562.23
39	OAT1046x-z-yy-39	1544.92	83	OAT1046x-z-yy-83	1562.64
40	OAT1046x-z-yy-40	1545.32	84	OAT1046x-z-yy-84	1563.05
41	OAT1046x-z-yy-41	1545.72	85	OAT1046x-z-yy-85	1563.45
42	OAT1046x-z-yy-42	1546.12	86	OAT1046x-z-yy-86	1563.86
43	OAT1046x-z-yy-43	1546.52	87	OAT1046x-z-yy-87	1564.27
44	OAT1046x-z-yy-44	1546.92	88	OAT1046x-z-yy-88	1564.68

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2. The outline of action and examples for application circuits described herein have been chosen as an explanation for the standard action and performance of the product. When planning to use the product, please ensure that the external conditions are reflected in the actual circuit, assembly, and program designs.
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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.