

## **EATV6400x-FM05S Series**

### **High Power Multi-ports Output CATV FTTx**

### **EYDFA Module (115 × 145 × 33mm)**



#### **Description**

Idealphotonics EATV6400 series is a low noise, high performance, high power multi-ports EYDFA module, which is specially designed for CATV system. It offers a flexible and low-cost FTTx solution for CATV large area coverage of metropolises and medium-sized cities.

GM is Gain Block Module, without electronic control circuit.

FM is Full function Module which is with electronic control circuit.

EATV6400D series adopts with Pre-amplifier , and the pre-amplifier adopts low noise EDFA, output cascade adopts high power EYDFA. When input optical power  $P_{in}=0dBm$ , the noise figure of unit is: Typ  $\leq 4.5dB$ , Max  $\leq 5.0dB$

EATV6400S series adopts without Pre-amplifier high power EYDFA. In order to make sure the good noise figure, the input optical power should be

>15dBm.

EATV6400 □ -FM05S a full function module,adopts small size package 115×145×33mm. Total output power≤36dBm, and output optical ports ≥4 .

When use this module, customers should add heat sink and forced air -cooling, to ensure high reliability and long life of the module.

## Feathure

- Small size package (115×145×33mm)
- Advanced electronic control circuit.
- Perfect optic feature.
- The integrated low-power design.
- APC、ACC work mode.
- The standard RS232 communication interface.
- Low noise figure (Typ≤4.5dB, Max≤5.0dB Pin=0dBm, EATV6400D) .
- EATV6400D (with Pre-amplification), EATV6400S (without Pre-amplification)

optional.

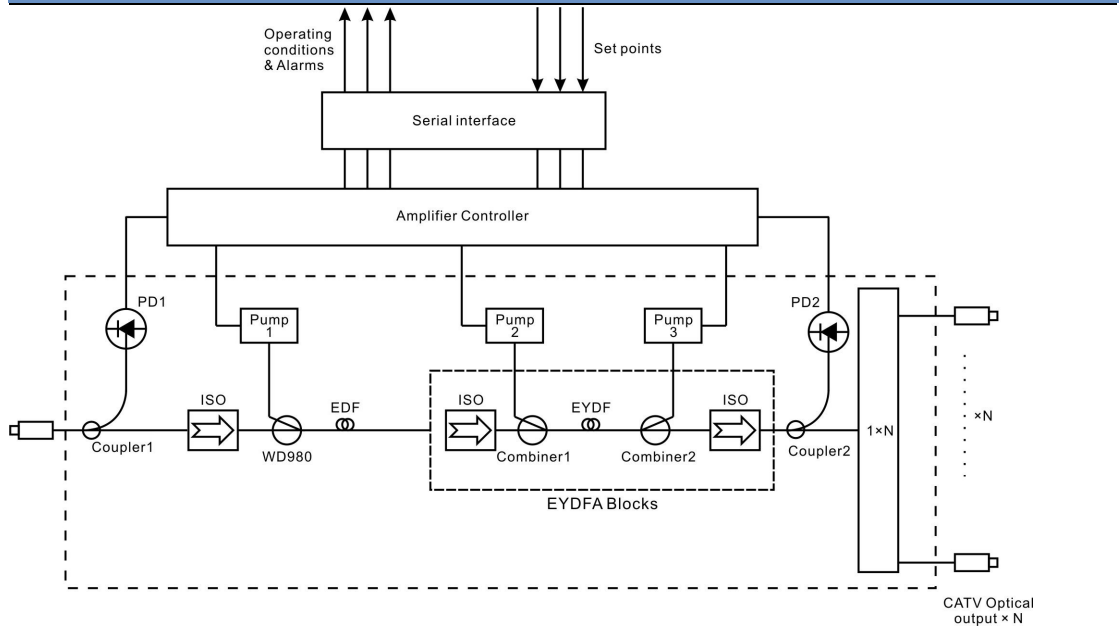
- Output power adjustable.
- Total output power 27~36dBm optional.
- Output optical ports:4~64 optional.
- Excellent P/P ratio

## Application

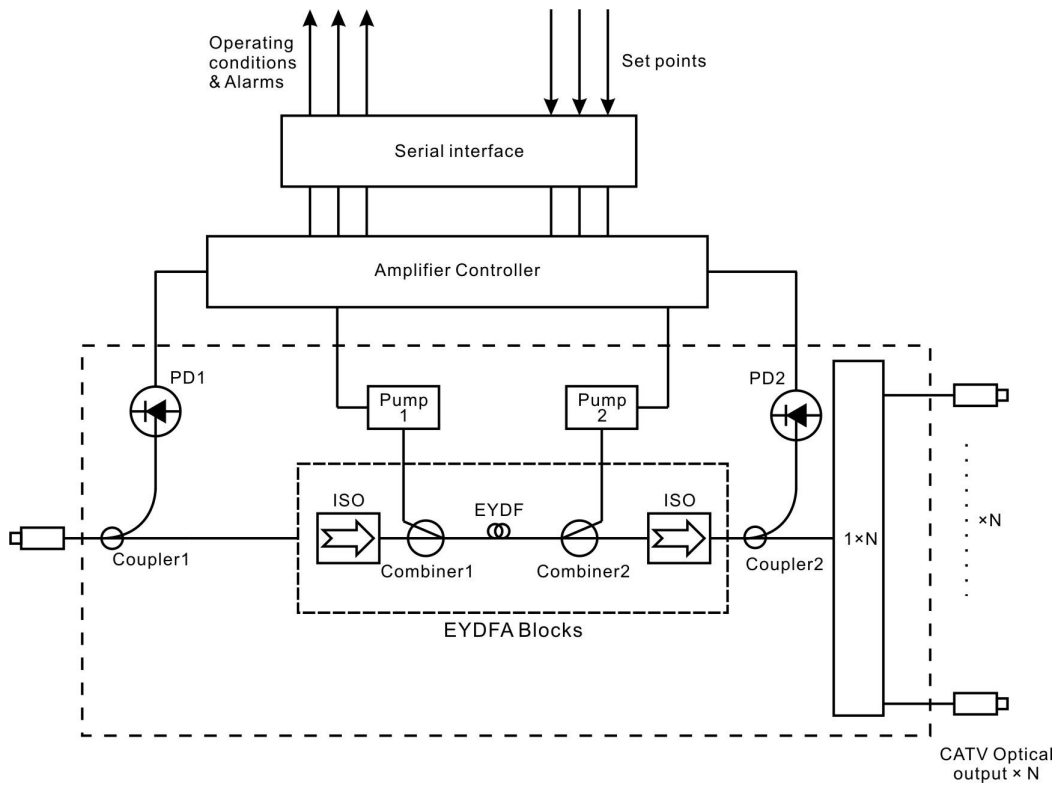
- AM CATV
- Digital CATV
- DBS
- FTTx PON

## FUNCTIONAL DIAGRAM

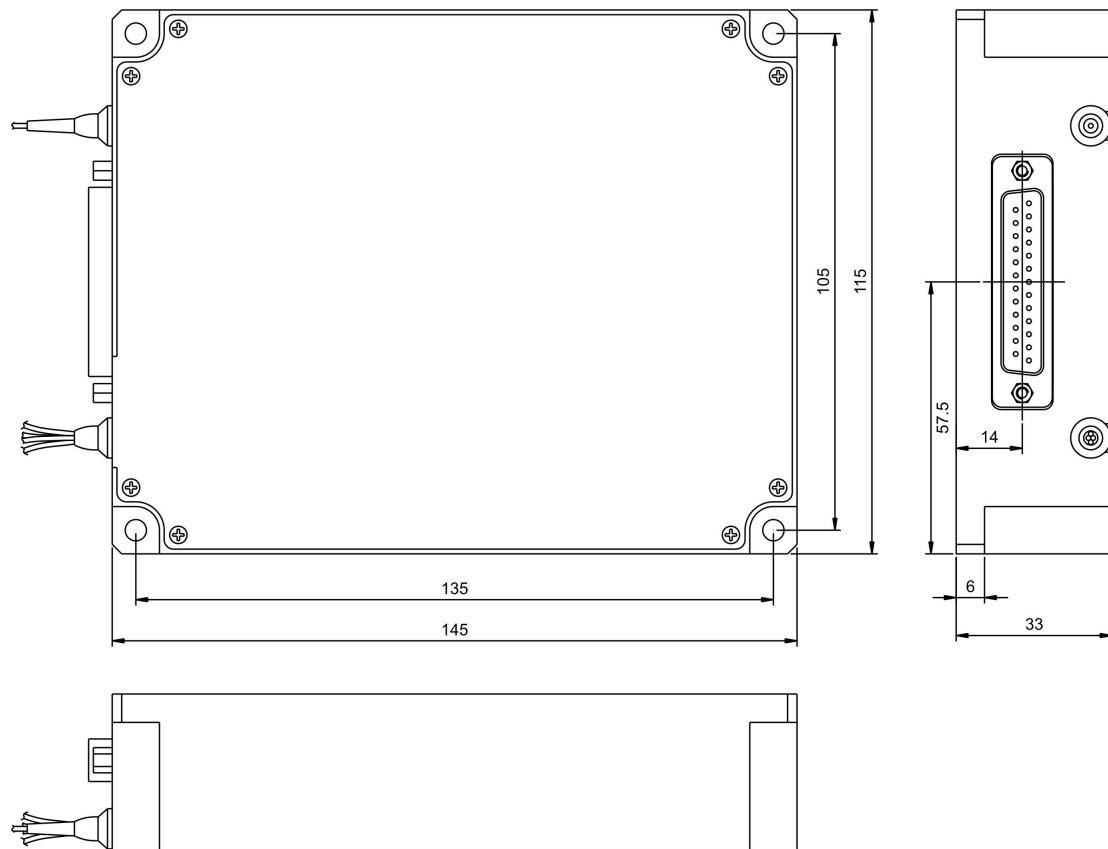
### EATV6400D-FM05S



## EATV6400S-FM05S



## DIMENSION



## PIN DEFINITION

Pin	Definition	Pin	Definition
1	VCC +5V	14	GND
2	VCC +5V	15	GND
3	VCC +5V	16	GND
4	VCC +5V	17	GND
5	NC	18	RS232 out (TTL) TXD
6	NC	19	Input power alarm*
7	EDFA temp. alarm*(TTL)	20	NC
8	Output power alarm*(TTL)	21	Amplifier expiration input
9	Pump bias current alarm*(TTL)	22	RS232 in (TTL) RXD
10	Pump temp. alarm*(TTL)	23	NC
11	NC	24	VCC +5V
12	VCC +5V	25	GND
13	GND		

\* All warning set at the TTL high level.

## Specification

Performance		Index			Supplement	
		Min.	Typ.	Max.		
Optical feature	Operating wavelength range	(nm)	1540		1563	EATV6400D
			1540		1575	EATV6400S
	CATV input power range	(dBm)	-10	>0	+10	EATV6400D
			15			EATV6400S
	Total output power	(dBm)	27		36	
	Number of output ports		4		64	
	Each of output power	(dBm)			27	
	Difference each of output power	(dB)	-0.5		+0.5	
	Output power adjustable range	(dBm)	-6		0	
	Noise figure	(dB)		4.5	5.0	EATV6400D: Pin=0dBm
				4.5	5.0	EATV6400S: Pin>15dBm
	Polarization dependence loss	(dB)			0.3	
	Polarization dependence gain	(dB)			0.4	
	Polarization mode dispersion	(ps)			0.3	
	Input / output isolation	(dB)	30			
	Pump power leakage	(dBm)			-30	
Echo loss	(dB)	45			UPC	
		55			APC	
General	Communication interface		RS232			
	Fiber type		Coming SMF-28™ or equivalent			
	Pigtail buffer diameter	(mm)		0.9		Optional 1.2, 1.5, 2.0
	Pigtail length	(mm)		1000		

Power supply	(V)	+4.75	+5	+5.25	
Power consumption	(W)			30	
Work temp.	(°C)	-5		70	
Storage temp.	(°C)	-40		85	
Working relative humidity	(%)	5		95	

## Product series

Model	Total output power	Number of	Each port	Optical mode
EATV6427D-FM05S-08×16.5	27dBm(500mW)	8	16.5	With Pre-amplifier <sup>1)</sup>
EATV6428D-FM05S-08×17.5	28dBm(630mW)	8	17.5	
EATV6429D-FM05S-08×18.5	29dBm(800mW)	8	18.5	
EATV6429D-FM05S-16×15.0		16	15.0	
EATV6430D-FM05S-08×19.5	30dBm(1000mW)	8	19.5	
EATV6430D-FM05S-16×16.0		16	16.0	
EATV6431D-FM05S-08×20.5	31dBm(1260mW)	8	20.5	
EATV6431D-FM05S-16×17.0		16	17.0	
EATV6432D-FM05S-08×21.5	32dBm(1600mW)	8	21.5	
EATV6432D-FM05S-16×18.0		16	18.0	
EATV6433D-FM05S-16×19.0	33dBm(2000mW)	16	19.0	
EATV6433D-FM05S-32×15.5		32	15.5	
EATV6434D-FM05S-16×20.0	34dBm(2500mW)	16	20.0	
EATV6434D-FM05S-32×16.5		32	16.5	
EATV6435D-FM05S-16×21.0	35dBm(3200mW)	16	21.0	
EATV6435D-FM05S-32×17.5		32	17.5	
EATV6436D-FM05S-16×22.0	36dBm(4000mW)	16	22.0	
EATV6436D-FM05S-32×18.5		32	18.5	
EATV6436D-FM05S-64×15.0		64	15.0	

remark: 1. EATV6400S-FM05S optional , without Pre-amplifier .

2. The number of output and each port output power can be optional by users.

## Ordering information

EATV 6 4 □□ □ - FM 05S - □□ × □□ - □□ - φ□□ / □□

Product series	Optical bandwidth		Product Type		Output power		Optical mode		Module Type		Exterior		Number of output ports		Each of output power	Connector		Pigtail length (mm)		Fiber length															
CATV EDFA Module	6	1540~1563nm CATV	4	EYDFA	27	27dBm	D	With Pre-amplifier	FM	Full function module	05	115 x 145 x 33	08	8ports	13~27dBm	LA	LC/APC	0.9	φ0.9	05	0.5M														
					28	28dBm												1.2	φ1.2	08	0.8M														
					29	29dBm												S	Without Pre-amplifier	GM	Gain block module	16	16ports	LP	LC/APC	1.5	φ1.5	10	1.0M						
					30	30dBm																								32	32ports	SA	SC/APC	2.0	φ2.0
					31	31dBm																													
					32	32dBm												64	64ports	SP	SC/APC	2.0	φ2.0	FA	FC/APC										
				33	33dBm																														
				34	34dBm																														
				35	35dBm																														
				36	36dBm	FP	FC/APC																												