

# EATV5400x-FM05 ( 125×150×30.5mm )

## High Power Multi-ports Output CATV FTTP EYDFA Module

### PRODUCT DESCRIPTION

EATV5400 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 FTTP 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.

EATV5400D series adopts with Pre-amplifier , and the pre-amplifier adopts low noise EDFA, output cascade adopts high power EYDFA. When input optical power  $P_{in}=0\text{dBm}$ , the noise figure of unit is: Typ  $\leq 4.5\text{dB}$ , Max  $\leq 5.0\text{dB}$ .

EATV5400S series adopts without Pre-amplifier high power EYDFA. In order to make sure the good noise figure, the input optical power should be  $>15\text{dBm}$ . distance.

EATV5400x-FM05S is a full function module, adopts industry standard form factor 125×150×30.5mm. Total output powers  $\leq 37\text{dBm}$ , and output optical ports  $\geq 4$ .

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



### PRODUCT FEATURES

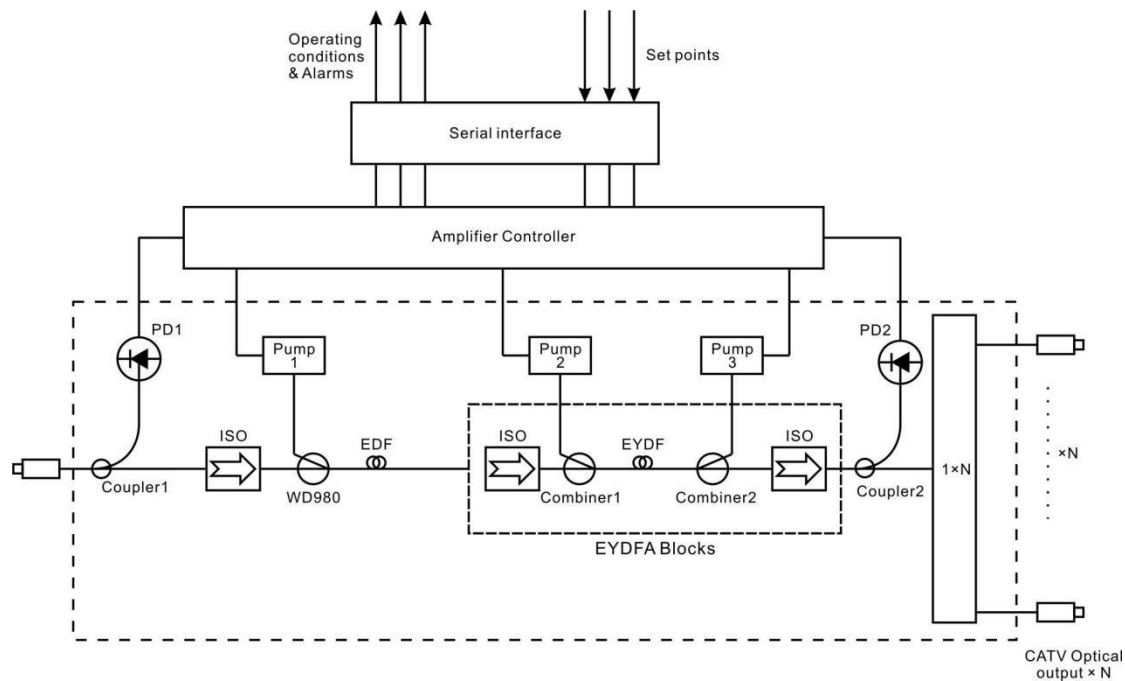
- ▶ Industry Standard Form Factor (125×150×30.5mm)
- ▶ Advanced electronic control circuit
- ▶ Perfect optic feature
- ▶ The integrated low-power design
- ▶ APC, ACC work mode
- ▶ The standard RS232 communication interface
- ▶ Low noise figure (Typ  $\leq 4.5\text{dB}$ , Max  $\leq 5.0\text{dB}$   $P_{in}=0\text{dBm}$ , EATV5400D )
- ▶ EATV5400D (with Pre-amplifier ), EATV5400S (without Pre-amplifier ) optional
- ▶ Output power adjustable
- ▶ Total output power 27~37dBm optional
- ▶ Output optical ports: 4~64 optional
- ▶ Excellent P/P ratio

### MAIN APPLICATION

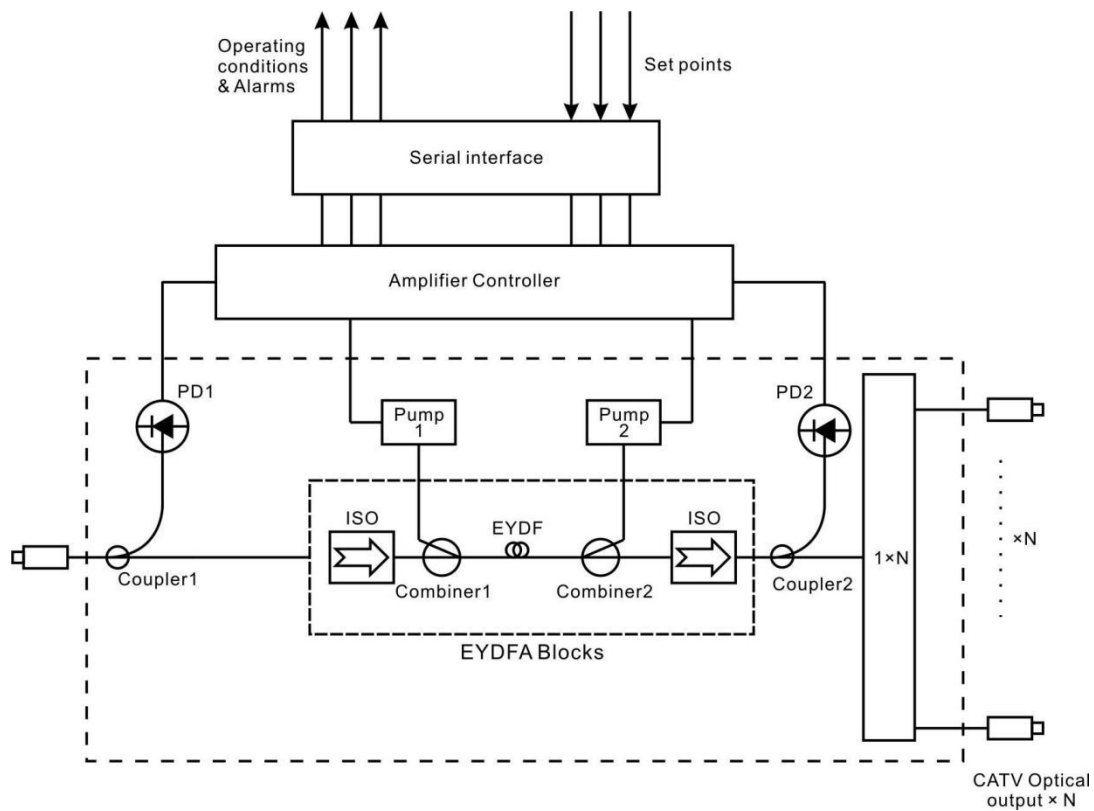
- ▶ AM CATV
- ▶ Digital CATV
- ▶ DBS
- ▶ FTTx PON

## FUNCTIONAL DIAGRAM

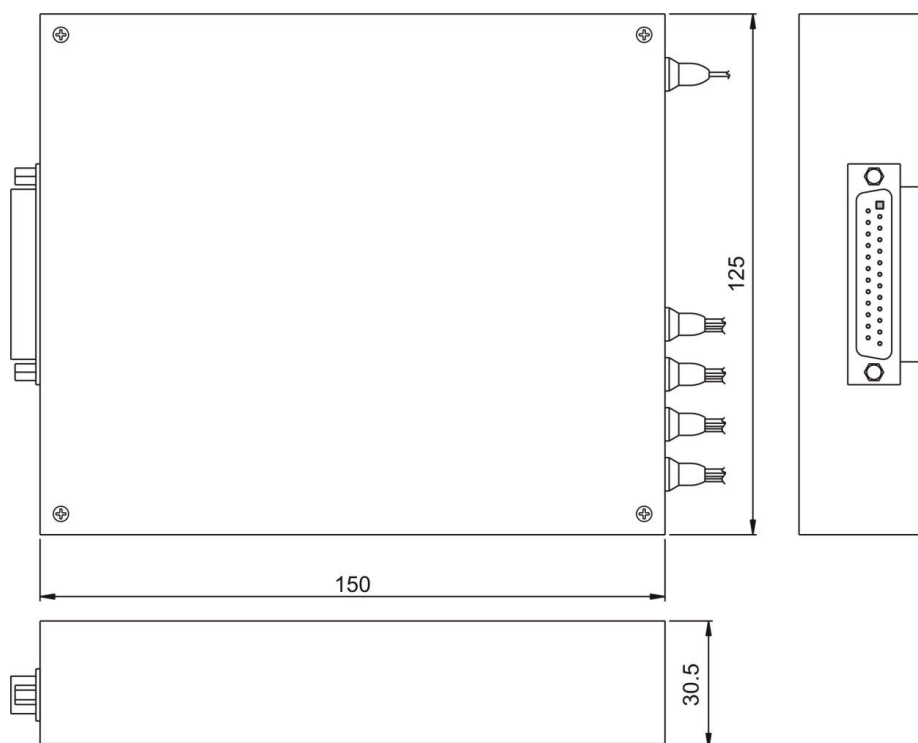
EATV5400D-FM05



EATV5400S-FM05



## DIMENSIONS



## 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.

## TECHNICAL INDEX

Performance			Index			Supplement
			Min.	Typ.	Max.	
Optical feature	Operating wavelength range	(nm)	1540		1563	EATV5400D
			1540		1575	EATV5400S
	CATV input power range	(dBm)	-10	>0	+10	EATV5400D
			15			EATV5400S
	Total output power	(dBm)	27		37	
	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	EATV5400D: Pin=0dBm
				4.5	5.0	EATV5400S: 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 feature	Communication interface		RS232			
	Fiber type		Coming SMF-28 <sup>TM</sup> 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	
	Size	(mm)	125×150×30.5			(W)×(D)×(H)

## PRODUCT SERIES

Module	Total output power	Number of output ports	Each of output power	Optical mode
EATV5427D-FM05-08×16.5	27dBm(500mW)	8	16.5	双级放大 <sup>1)</sup>
EATV5428D-FM05-08×17.5	28dBm(630mW)	8	17.5	
EATV5429D-FM05-08×18.5	29dBm(800mW)	8	18.5	
EATV5429D-FM05-16×15.0		16	15.0	
EATV5430D-FM05-08×19.5	30dBm(1000mW)	8	19.5	
EATV5430D-FM05-16×16.0		16	16.0	
EATV5431D-FM05-08×20.5	31dBm(1260mW)	8	20.5	
EATV5431D-FM05-16×17.0		16	17.0	
EATV5432D-FM05-08×21.5	32dBm(1600mW)	8	21.5	
EATV5432D-FM05-16×18.0		16	18.0	
EATV5433D-FM05-16×19.0	33dBm(2000mW)	16	19.0	
EATV5433D-FM05-32×15.5		32	15.5	
EATV5434D-FM05-16×20.0	34dBm(2500mW)	16	20.0	
EATV5434D-FM05-32×16.5		32	16.5	
EATV5435D-FM05-16×21.0	35dBm(3200mW)	16	21.0	
EATV5435D-FM05-32×17.5		32	17.5	
EATV5436D-FM05-16×22.0	36dBm(4000mW)	16	22.0	
EATV5436D-FM05-32×18.5		32	18.5	
EATV5436D-FM05-64×15.0		64	15.0	
EATV5437D-FM05-32×19.5	37dBm(5000mW)	32	19.5	
EATV5437D-FM05-64×16.0		64	16.0	

Remark: 1. EATV5400S-FM05 optional , without Pre-amplifier .

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

## MODEL EXPLANATION

EATV 5 4 □□ □ - FM 05 - □□ x □□ - □□ - 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	5	1540~1563nm CATV	1	EYDFA	27	27dBm	D	With Pre- amplifier	FM	Full function module	05	125 × 150 × 30.5	08	8ports	13~27dBm	LA	LC/APC	0.9	ø0.9	05	0.5M			
					28	28dBm							S	Without Pre-amplifier								GM	Gain block module	
			29	29dBm	32	32ports	SA	SC/APC	1.5	ø1.5	10	1.0M												
			30	30dBm	64	64ports									SP	SC/UPC	2.0	ø2.0						
			31	31dBm	FA	FC/APC																		
			32	32dBm					FP	FC/UPC														
			33	33dBm																				
			34	34dBm																				
			35	35dBm																				
			36	36dBm																				
37	37dBm																							