1xN Opto-Mechanical Switch

Feathure

Unmatched Low Cost
Low Insertion Loss
Epoxy-Free Optical Path
High Reliability and Stability
High Stability

Application

Configurable Optical Networks
Fiber Optic Instruments
Optical Signal Routing
Testing Instruments
System Monitoring

Specification

Parameters	Unit	Value		
Center Wavelength	nm	1310, 1550, 1310&1550		
Bandwidth	nm	+/-40		
Configuration	-	1xN (N≤45)	1xN (45<N≤88)	1xN (88<N≤128)
Insertion Loss	dB	≤1.0	≤1.6	≤2.0
Wavelength Dependent Loss	dB	≤0.25		
Return Loss	dB	≥50		
PDL	dB	≤0.10		
Cross Talk	dB	≥50		
Switching Speed	ms	≤10 (Sequence switch time of adjacent channel)		
Durability	cycle	≥10,000,000		
Repeatability	dB	≤+/-0.05		
Fiber Type	-	SMF-28 Fiber		
Fiber Tensile Load	N	5		
Maximum Optical Power (CW)	mW	300		
Operating Temperature	°C	0~70		
Storage Temperature	°C	-40~85		

Note: 1. Specifications are for device without connectors; Specifications may change without notice.

2. To add connectors, IL is 0.3dB higher, RL is 5dB lower.

3. Devices for higher optical power or with other type fiber or consigned fiber are also available.

Pin Configuration

DB9 Male Connector (Max.1x16):

Pi	Signal	I/O	Description
1	D0	Input	TTL, Channel Selection Bit
2	D1	Input	TTL, Channel Selection Bit
3	D2	Input	TTL, Channel Selection Bit
4	D3	Input	TTL, Channel Selection Bit
5	/RESET	Input	TTL, L: reset to channel 0, H: Channel selection bit are effective
6	/READY	Output	TTL, L=Ready, H=Not Ready
7	ERROR	Output	TTL, H=Error, L=No Error
8	GND	Input	Ground
9	+5VDC	Input	5.0±5%VDC Power Supply (max550mA)

DB15 Male Connector (Max. 1x32):

Pin#	Signal	I/O	Description
2	D0	Input	TTL, Channel Selection Bit
3	D1	Input	TTL, Channel Selection Bit
4	D2	Input	TTL, Channel Selection Bit
5	D3	Input	TTL, Channel Selection Bit
6	D4	Input	TTL, Channel Selection Bit
11	/RESET	Input	TTL, L: reset to channel 0, H: Channel selection bit are effective
7	/READY	Output	TTL, L=Ready, H=Not Ready
8	ERROR	Output	TTL, H=Error, L=No Error
1, 9	GND	Input	Ground
15	+5VDC	Input	5.0±5%VDC Digital Power Supply (max50mA)
12	VM	Input	5.0±5%VDC or 12.0±5% Drive Power Supply (max500mA)
10, 13, 14	NA	NA	

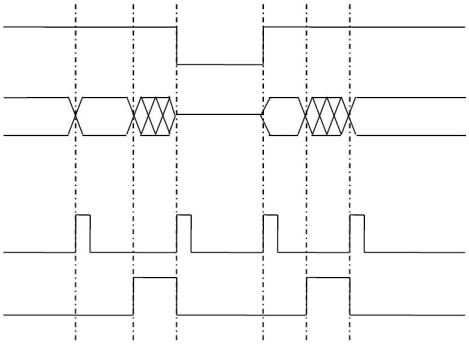
DB25 Male Connector (Max. 1x128):

Pin#	Signal	I/O	Description	
15	D0	Input	TTL, Channel Selection Bit	
16	D1	Input	TTL, Channel Selection Bit	
17	D2	Input	TTL, Channel Selection Bit	
18	D3	Input	TTL, Channel Selection Bit	
19	D4	Input	TTL, Channel Selection Bit	
20	D5	Input	TTL, Channel Selection Bit	
21	D6	Input	TTL, Channel Selection Bit	
22	/RESET	Input	TTL, L: reset to channel 0, H: Channel selection bit are effective	
2	/READY	Output	TTL, L=Ready, H=Not Ready	
3	ERROR	Output	TTL, H=Error, L=No Error	
1, 10, 14, 23	GND	Input	Ground	
12, 25	+5VDC	Input	5.0±5%VDC Digital Power Supply (max50mA)	
13	VM	Input	5.0±5%VDC or 12.0±5% Drive	N≤45, Max. 500mA
11, 24				N≤88, Max. 750mA
				N≤128, Max. 1000mA
4, 5, 6, 7, 8, 9	NA	NA		

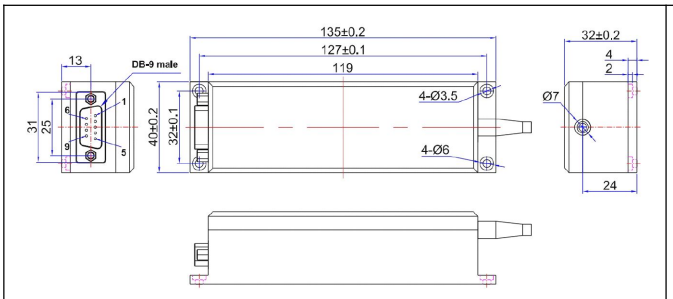
CHANNEL SLECTION TABLE

Optical	Input							
	/RESE	D6	D5	D4	D3	D2	D1	D0
RESET	0	NA	NA	NA	NA	NA	NA	NA
Com-1	1	0	0	0	0	0	0	0
Com-2	1	0	0	0	0	0	0	1
Com-3	1	0	0	0	0	0	1	0
…	1	…	…	…	…	…	…	…
Com-128	1	1	1	1	1	1	1	1

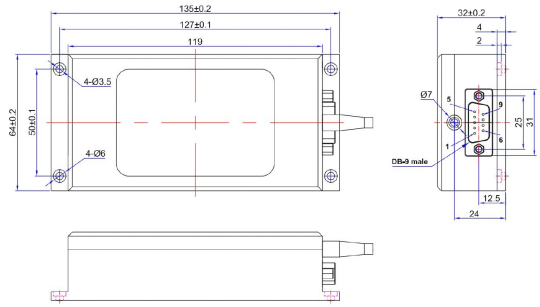
TIMING DIAGRAM



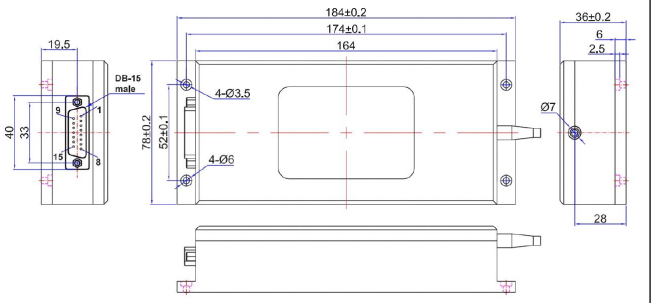
Package Dimensions



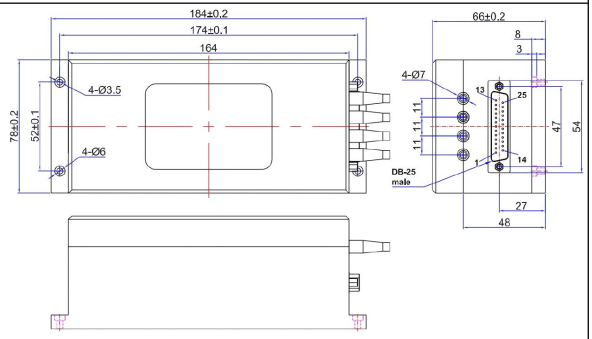
Package A: DB9 Male, N≤4



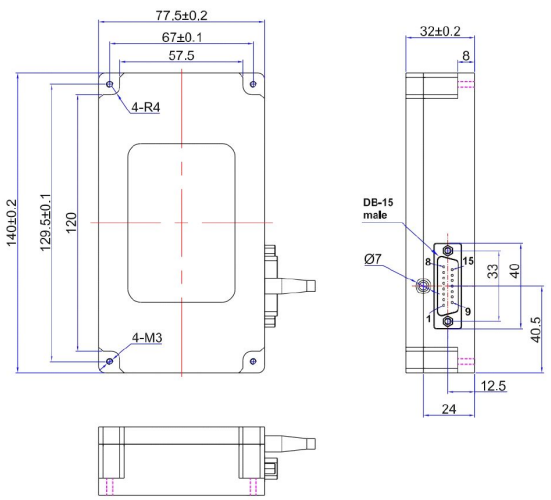
Package B: DB9 Male, N≤12



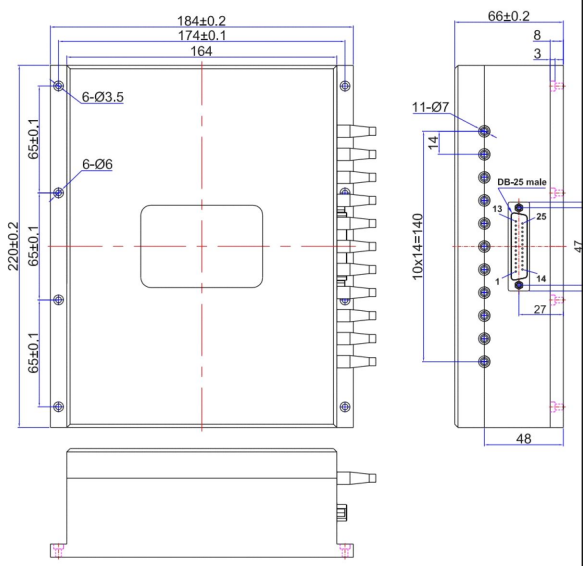
Package C: DB15 Male, N≤16



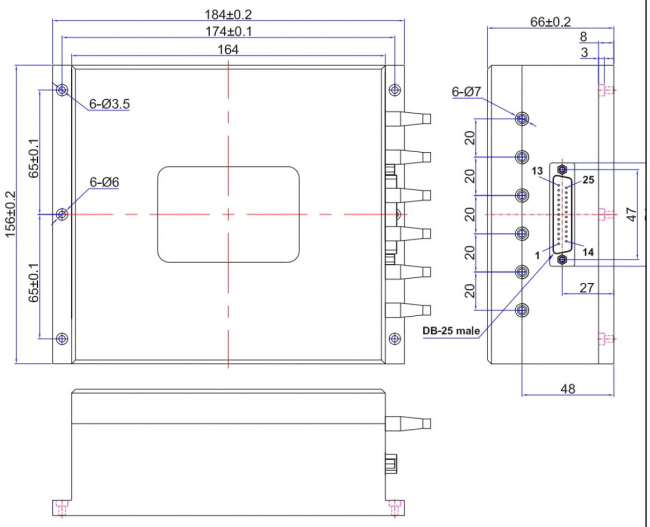
Package D: DB25 Male, N≤45



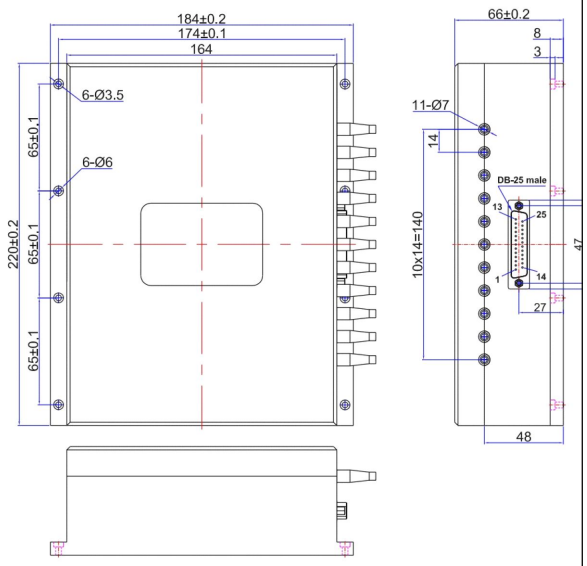
Package E: DB15 Male, N≤16



Package F: DB15 Male, N≤32



Package G: DB25 Male, N≤88



Package H: DB25 Male, N≤128

Ordering information

FOMS-	NNNN	-M	NNN	C	-	C	NN	-	CC/CCC
	Center Wavelength		Configuration:	Package		Fiber Sleeve	Fiber Length		Connector Type
	1310= 1310nm		004= 1x4 Type	A=Package A		B= 250um Bare Fiber	10=1.0m		N =Without Connector
	1550= 1550nm		032= 1x32 Type	E=Package E		L= 900um Loose Tube	15=1.5m		FC/APC=FC/APC Connector
	1315= 1310nm&1550nm			H=Package H		2=2mm Cable	20=2.0 m		LC/PC =LC/PC Connector
	128=1x128 Type								