

# Video/RF Cable

## Broadband CATV Coaxial Cables

### Series 6 (RG-6/U Type)

Description	Part No.	UL NEC/ C(UL) CEC Type	Standard Lengths		Standard Unit Weight		Conductor (stranding) Diameter Nom. DCR	Nominal Core OD		Shielding Materials Nom. DCR	Nominal OD		Nom. Imp. (Ω)	Nom. Vel. of Prop.	Nominal Capacitance		Nominal Attenuation		
			Ft.	m	Lbs.	kg		Inch	mm		Inch	mm			pF/Ft.	pF/m	MHz	dB/100 Ft.	dB/100m

**Series 6 • 18 AWG Solid .040" Bare Copper-covered Steel Conductor • Duobond® II\* + Aluminum Braid Shield (60% Coverage)**

**Gas-injected Foam Polyethylene Insulation • PVC Jacket (Available in Black, White or White Neutral)**

80°C	<b>9116</b>	NEC: CATV CM CEC: CM	U-1000 <sup>▲</sup> 1000	U-304.8 304.8	30.0 31.0	13.6 14.1	18 AWG (solid) .040"	.180	4.57	Duobond II* + 60% Aluminum Braid	.270	6.86	75	83%	16.2	53.2	See Chart on page 6.92		
							28.0Ω/M' 91.9Ω/km												

▲U-1000 ft. put-up also available in Beige.

**Gas-injected Foam Polyethylene Insulation • PVC Jacket (Available in Black, White, Gray or Neutral)**

80°C	<b>1829A</b>	NEC: CATV CM CEC: CM	U-1000 1000	U-304.8 304.8	29.0 29.0	13.2 13.2	18 AWG (solid) .040"	.180	4.57	Duobond II + 60% Aluminum Braid	.270	6.86	75	83%	16.2	53.2	5	.5	1.6
							28.0Ω/M' 91.9Ω/km										55	1.4	4.6
																	211	2.6	8.5
																	500	4.1	13.5
																	750	5.1	16.7
																	862	5.5	18.0
																	1000	6.0	19.7
																	1450	7.8	25.6
																	1800	8.6	28.2
																	2250	9.8	32.2
																	3000	11.3	37.1

80°C	<b>1829R</b> <small>new</small>	NEC: CATVR, CMR CEC: CMG FT4	U-1000* 1000	U-304.8 304.8	29.0 29.0	13.2 13.2	18 AWG (solid) .040"	.180	4.57	Duobond II + 60% Aluminum Braid	.270	6.86	75	83%	16.2	53.2	5	.5	1.6
							28.0Ω/M' 91.9Ω/km										55	1.4	4.6
																	211	2.6	8.5
																	500	4.1	13.5
																	750	5.1	16.7
																	862	5.5	18.0
																	1000	6.0	19.7
																	1450	7.8	25.6
																	1800	8.6	28.2
																	2250	9.8	32.2
																	3000	11.3	37.1

\*U-1000 ft. put-up not available in Neutral.

**Plenum • Foam FEP Insulation • Natural Flamarrest® Jacket**

75°C	<b>1829P</b> <small>new</small>	NEC: CATVP, CMP CEC: CMP FT6	U-1000 1000	U-304.8 304.8	27.0 27.0	12.3 12.3	18 AWG (solid) .040"	.170	4.32	Duobond II + 60% Aluminum Braid	.235	5.97	75	83%	16.3	53.5	1	.3	1.0
							28.0Ω/M' 91.9Ω/km										10	.7	2.2
																	50	1.5	4.9
																	100	2.1	6.9
																	200	3.0	9.8
																	400	4.4	14.4
																	700	6.1	20.0
																	900	7.2	23.6
																	1000	7.6	24.9
																	1450	9.6	31.5
																	1800	11.0	36.1
																	2250	12.7	41.7
																	3000	15.1	49.5

**Series 6 • 18 AWG Solid .040" Bare Copper-covered Steel Conductor • Duobond® IV\* Quad Shield (60% and 40% Coverage)**

**Gas-injected Foam Polyethylene Insulation • PVC Jacket (Available in Black or White)**

80°C	<b>1189A</b>	NEC: CATV CM CEC: CM	U-500 1000	U-152.4 304.8	18.0 35.0	8.2 15.9	18 AWG (solid) .040"	.180	4.57	Duobond IV 60% & 40% Aluminum Braids	.298	7.57	75	83%	16.2	53.2	See Chart on page 6.88		
							28.0Ω/M' 91.9Ω/km												

▼1000 ft. put-up also available in Beige or Neutral.

**Plenum • Foam FEP Insulation • Natural Flamarrest Jacket**

75°C	<b>1189AP</b>	NEC: CATVP CMP CEC: CMP FT6	1000 <sup>†</sup> 1000	304.8 304.8	32.0 32.0	14.5 14.5	18 AWG (solid) .040"	.170	4.32	Duobond IV 60% & 40% Aluminum Braids	.248	6.30	75	83%	16.3	53.5	1	.3	1.0
							28.0Ω/M' 91.9Ω/km										10	.7	2.2
																	50	1.6	5.2
																	100	2.2	7.2
																	200	3.0	9.8
																	400	4.6	15.1
																	700	6.6	21.7
																	900	7.7	25.3
																	1000	8.2	26.9

BCCS = Bare Copper-covered Steel • DCR = DC Resistance

Contact the Belden Customer Service Department for a Comprehensive Connector Cross Reference. **1-800-BELDEN-1**.

\* Duobond II = Bonded Duofoil® (100% coverage) + aluminum braid (60% coverage).

For additional selection of Belden® Video Cables, refer to the Coaxial and Broadcast Cables sections of this catalog.

Duobond IV = Duobond II + 60% aluminum braid + Duofoil® tape + 40% aluminum braid.

†Spools and/or UnReel® cartons are one piece, but length may vary ±10% for spools and ±5% for UnReel from length shown.



# SRT-2,4, & 8A

## Solder Back Directional Couplers



### ○ Features & Benefits

- 1 GHz Bandwidth
- 2,4 and 8 Port Models
- 120 dB RFI Shielding
- Diecast Housing
- Built-in Ground Block

### ○ Specifications

#### SRT-2A Tap Value

Tap Loss (± dB)  
 5 - 450 MHz:  
 450 - 750 MHz:  
 750 - 1000 MHz:

Insertion Loss (dB)  
 5 - 50 MHz:  
 50 - 450 MHz:  
 450 - 750 MHz:  
 750 - 1000 MHz:

Isolation Tap-to-Tap (dB):  
 5 - 10 MHz:  
 10 - 450 MHz:  
 450 - 750 MHz:  
 750 - 1000 MHz:

Isolation Out-to-Tap (dB)  
 5 - 50 MHz:  
 50 - 450 MHz:  
 450 - 750 MHz:  
 750 - 1000 MHz:

Return Loss (IN/OUT) (dB)  
 5 - 10 MHz:  
 10 - 50 MHz:  
 50 - 750 MHz:  
 750 - 1000 MHz:

Return Loss (Tap) (dB)  
 5 - 10 MHz:  
 10 - 50 MHz:  
 50 - 750 MHz:  
 750 - 1000 MHz:

**4 8 11 14 17 20 23 26 29 32**

1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
1.0	1.0	1.0	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.5
1.0	1.5	1.5	1.5	1.5	1.5	1.5	2.0	2.0	2.0	2.0

*	3.0	2.3	1.2	1.0	0.9	0.7	0.7	0.7	0.7	0.7
*	3.2	2.5	1.2	1.0	0.9	0.7	0.7	0.7	0.7	0.7
*	3.3	2.6	1.5	1.3	1.2	1.2	1.0	1.0	1.0	1.0
*	3.5	3.0	2.2	1.8	1.2	1.2	1.2	1.2	1.2	1.2

						22				
						26				
						25				
						22				

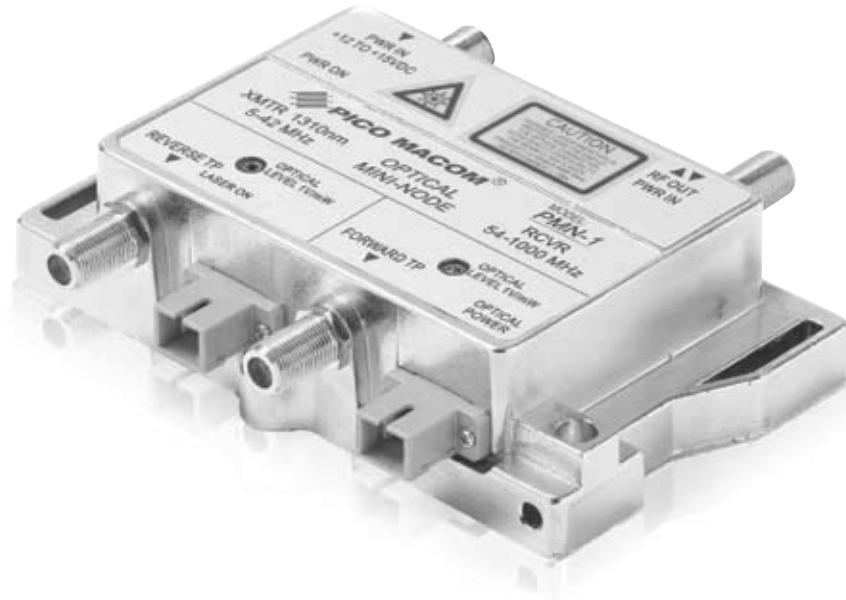
-	26	31	33	35	36	38	38	38	40	
-	23	26	28	32	33	35	35	35	35	
-	23	26	26	28	30	30	30	32	35	
-	22	24	25	26	29	30	30	32	35	

18	16	18	18	18	18	18	18	18	18	18
20	18	20	20	20	20	20	20	20	20	20
18	18	20	20	20	20	20	20	20	20	20
16	16	16	16	16	16	16	16	16	16	16

						16				
						18				
						20				
						18				

Blonder Tongue 's SRT Series of indoor 1GHz taps are the standard for directional couplers used in broadband systems such as those in educational, correctional, commercial, and MDU's. Models are available with 2, 4, and 8 tap ports and have tap values from 35 dB to 4 dB (model dependant) in 3 dB increments. All models have die-cast housings and provide RFI shielding of 120 dB.

\* Terminated



## PMN-1

### Mini-Indoor Optical Node

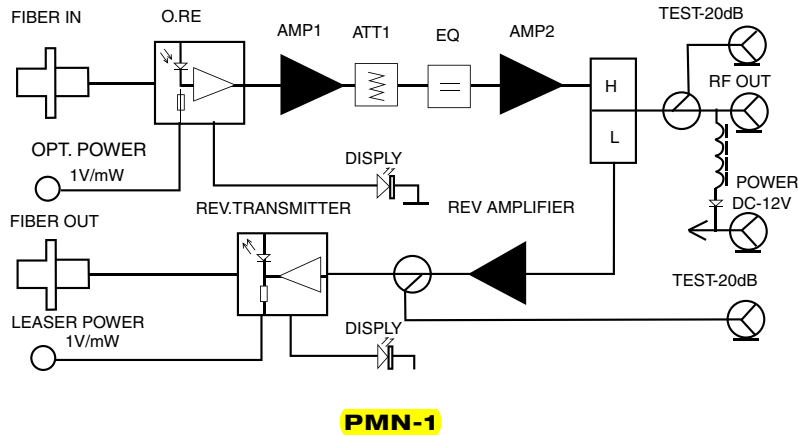
The Pico Macom model **PMN-1** is a compact, cost-effective and fully featured indoor optical node specifically designed for the delivery of analog and digital video, high-speed data and telephony signals into homes. This unit has diverse applications in MDU, industrial, government and educational institutions for the delivery of current and future broadband CATV services. The fiber core employed in the unit design is a 1310/1550 nm optical receiver with a wide optical input window of -6 to 3dBm. The **PMN-1** has an integrated optical attenuator and equalizer and a precision LED to indicate received optical power. The power is provided through coaxial cable (line) or an external wall mount power adaptor. The unit employs GaAs amplifier technology for excellent broadband RF performance and spurious-free RF output.

### Features

- Compact, 5" x 3" x 1.3" precision aluminum die-cast case guarantees excellent mechanical integrity, ease of installation and shielding effectiveness.
- Bi-directional operation with forward bandwidth from 54~1000MHz (analog and digital) and reverse bandwidth from 5~42MHz.
- Wide optical input range (-6dBm to 3dBm) provides excellent operation at low optical input levels.
- Full 25dBmV typical RF output for superior C/N performance.
- Return loss guarantees excellent impedance match across the frequency band with minimal reflection and cross coupling between ports.
- Optical power monitoring for optimal optical input and output power range indication.
- Calibrated 1V/mW optical input test point for signal monitoring.
- 12Vdc line powered with a wall mounted 20/240Vac wall adaptor. Integrated high linearit optical receiver and transmitter for two-way operation.

### Ordering Information

PMN-1 Mini-Indoor Optical Node



### Forward Receiver

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$\lambda$	Optical Wavelength	-	1290	-	1600	nm
$V_{Opt. In.}$	Monitor Voltage	$\lambda=1310$	-	1	-	V/mW
$P_{in}$	Optical Input Power	Continuous	-6	1	3	dBm
$f$	Frequency Range	-	54	-	1000	MHz
FL	Freq. Response Flatness	$f=53\sim 1000\text{MHz}$	-	$\pm 0.5$	-	dB
S22	Output Return Loss	$f=53\sim 1000\text{MHz}$	15	16	-	dB
$V_o$	Output Level	-	-	25	-	dBmV
	Optical Return Loss	-	45	-	-	dB
CTB	Composite Triple Beat	99chs flat,	-	-	-61	dB
CSO	Composite Second Order	$f_m=859.25\text{MHz}$	-	-	-60	dB

\* Test results are typical and were performed at our San Diego test center.

### Return Transmitter

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$\lambda$	Optical Wavelength	-	-	1310	-	nm
$W_{Out}$	Optical Output Power	Continuous	0.5	1	3	dBm
$V_{Opt. In.}$	Monitor Voltage	$\lambda=1310$	-	1	-	V/mW
$V_{rin.}$	RF Input Level	-	-	15	-	dBmV
$f$	Frequency Range (option)	-	5	-	42	MHz
FL	Freq. Response Flatness	$f=5\sim 42\text{MHz}$	-	$\pm 0.5$	-	dB
S11	Input Return Loss	$f=5\sim 42\text{MHz}$	15	16	-	dB
	Optical Output Return Loss	-	-	45	-	dB

### General

Symbol	Parameter	Conditions	Min.	Typ.	Max.	Unit
$I_{tot}$	Total Current Consumption	$V+=12\text{V}$	-	350	-	mA

Dimensions: 7.5" L x 4.2" W x 3.3" H

Weight: 0.75 lbs

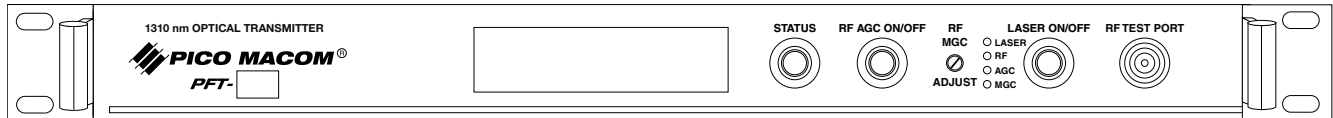


## **PFT** Series | 1310nm Optical Transmitters

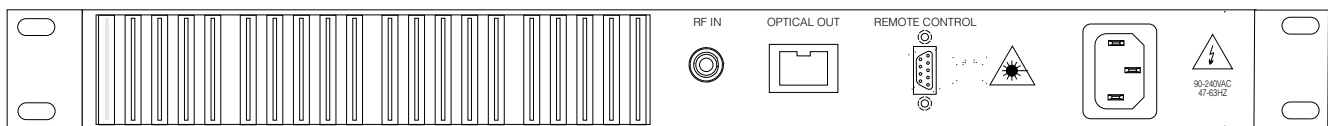
The Pico Macom **PFT** Series of optical transmitters is available in nine output power levels, from 6 to 14dBm, allowing flexibility in numerous CATV applications. Each unit takes various combinations of input modulated RF signals and converts them to light for distribution to nodes. With an optical wavelength of 1310nm and a bandwidth of 54~860MHz, the transmitter supports transmission of NTSC and QAM RF signals over a single-mode optical fiber. The **PFT** Series optical fiber transmitters are 19" wide and rack mounted with a height of 1RU.

### Features

- Wide bandwidth, 54~860MHz, high-performance single-mode 1310nm optical fiber transmitter.
- Supports analog and QAM digital applications.
- Wide range laser options, from 6dBm to 14dBm (4mW to 26mW), for multiple broadband applications.
- Optical power monitoring of input RF and laser status.
- RS232 port.
- Manual or automatic gain controls RF input level.
- Automatic gain controlled input allows unit to maintain the same optical output with varying inputs without distortion.
- Input voltage between 90-260Vac.
- Unit can be used for NTSC and PAL systems.
- Front panel RF test port -20dB.
- Low power consumption.



Front View



Rear View

## Specifications

Optical Output	
Power in dBm:	6, 7, 8, 9, 10, 11, 12, 13, 14 dBm
Optical Wavelength:	1310nm
Laser Type:	DFB
Optical Connector Type:	SC/APC (FC/APC Optional)
RF Frequency Range:	50~860 MHz
RF Input Level Range:	+15 to 20dBmV
RF Input Impedance:	75Ω
In-Band Flatness:	±1dB
Input Return Loss:	>15dB
Carrier-to-Noise (CNR)*:	>50dB
Composite Second Order (CSO)*:	>60dB
Composite Triple Beat (CTB)*:	>65dB
AGC Control Range:	±5dB
MGC Control Range:	±5dB
Power Supply Range:	90-264 Vac
Power Consumption (typical):	30 watts
Operating Temperature:	0° to 50°C
Storage Temperature:	-20° to +65°C
Relative Humidity:	<10%
Dimensions:	19" W x 13" D x 1.75" H
Weight:	9.15 lbs.

## Ordering Information

<b>PFT - 6</b>	<b>(6dBm or 4mW) - 1310nm Optical Transmitter</b>
PFT - 7	(7dBm or 5mW) - 1310nm Optical Transmitter
PFT - 8	(8dBm or 7mW) - 1310nm Optical Transmitter
PFT - 9	(9dBm or 8mW) - 1310nm Optical Transmitter
PFT - 10	(10dBm or 10mW) - 1310nm Optical Transmitter
PFT - 11	(11dBm or 14mW) - 1310nm Optical Transmitter
PFT - 12	(12dBm or 16mW) - 1310nm Optical Transmitter
PFT - 13	(13dBm or 20mW) - 1310nm Optical Transmitter
PFT - 14	(14dBm or 26mW) - 1310nm Optical Transmitter

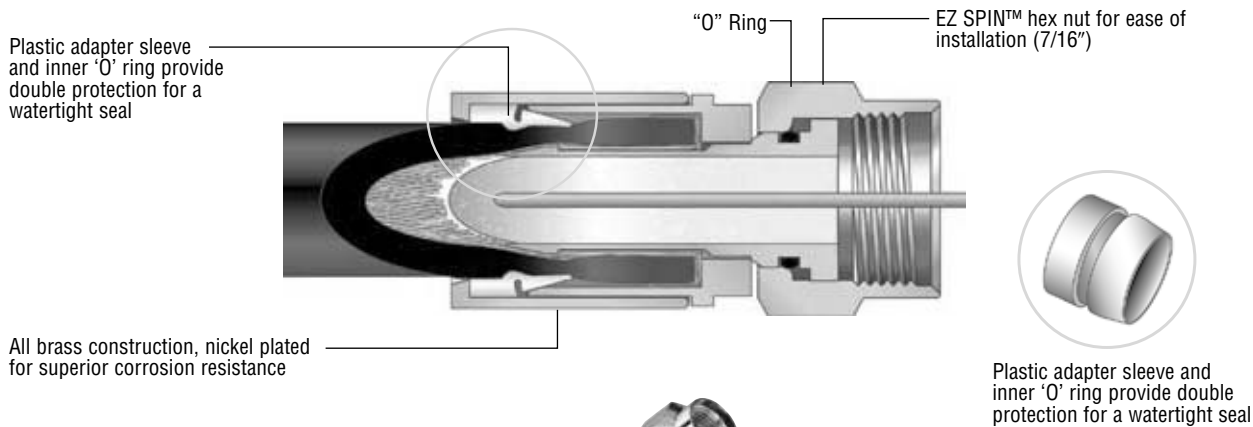
\* Test results are typical and were performed at our San Diego test center using an 80 channel NTSC Matrix generator as the RF source, appropriate optical loss budget for the 1310nm transmitter being tested and optical receiver input level of -1dBm.



# RTQ Universal Compression Connectors

IDEAL Compression Connectors are all single piece designs that are manufactured to meet the demands and expectations of the satellite and cable TV industry. All series of connectors are effortlessly positioned onto properly stripped coax and are permanently connected when terminated with an IDEAL OmniSeal Compression Tool. All IDEAL compression F-connectors use a standard 1/4", 1/4" strip. Multiple package quantities and connector features ensure that you will have the right connector for your application.

- Connectors to fit RG-59, RG-6, Plenum RG-6 & RG-11 coaxial cable
- Designated connectors fit regular (dual shield), tri and quad shield cables
- Approved for indoor/outdoor use



Cat. No.	Description	PKG QTY
<b>92-610</b>	<b>RG-59 Reg/Tri/Quad</b> Compression F-Connectors	50/jar
<b>92-619</b>		1000/box

<b>92-654</b>	<b>RG-6 Reg/Tri/Quad</b> Compression F-Connectors	4 pack
<b>92-651</b>		10 pack
<b>92-650</b>		50/jar
<b>92-656</b>		100/jar
<b>92-659</b>		1000/box
<b>92-660</b>	<b>RG-6 Plenum, Dual Shield</b> Compression F-Connectors	50/jar
<b>92-669</b>		1000/box

<b>89-211</b>	<b>RG-11, Dual Shield</b> Compression F-Connectors	10 pack
<b>89-1211</b>		500/box

Operation Specifications	
Bandwidth:	0 MHz - 3 GHz
Impedance:	75 Ohms (nominal)
Return Loss:	Minimum -30 dB @ 3 GHz
Tightening Torque:	30 in.-lbs.
Operating Temperature Range:	-40°F to +140°F
Cable Range:	60% through Quad Shield, PE and PVC jackets
Cable Retention:	40 lbs. minimum

Tooling Requirements:	
Data T®-Cutter	45-074
1/4" - 1/4" RG-6, RG-59 & Quad Cable Stripper	45-603, 45-526, 45-262, 45-282, 45-111
Compression Tool	30-603, 30-793
F-Connector Tool	35-046