

NP 298

Low Loss Plenum Precision Digital Video Coax Cable

Belden's new Brilliance® 7732LL Plenum RG-11 Type Precision Digital Video Coax offers a Return Loss guarantee of -23 dB (5 MHz to 1.6 GHz) and -21 dB (1.6 GHz to 4.5 GHz) and dramatically improved long-distance transmission performance for HD-SDI or 1080p applications.



Belden® Brilliance 7732LL Plenum-rated RG-11 Type Coax Offers Belden's Outstanding Return Loss Guarantee and the Best HD-SDI Long-run Performance Short of Using Fiber

Perhaps no other market segment values cable performance as highly as the professional broadcast, audio/video and entertainment industry, where signal transmission failure is not an option. In this industry, cable performance has both immediate and far-reaching implications, and that means the cables must deliver absolute signal integrity with no system downtime. Time and again, Belden has proven its commitment to the industry through its top quality products, product innovation and technical excellence.

Lowest Return Loss - Guaranteed

Brilliance 7732LL carries Belden's industry-leading Return Loss guarantee of -23 dB from 5 MHz to 1.6 GHz and -21 dB from 1.6 GHz to 4.5 GHz — making it the only plenum RG-11 cable in the marketplace with this level of guaranteed Return Loss performance.

Longest Transmission Distance Performance in the Industry

As digital video has progressed from SDI to HD-SDI and now to 1080p/60 and 1080p/50 (3G), these applications have placed greater length constraints on copper cables, especially plenum-rated cables. However, Belden Brilliance Low Loss Plenum RG-11 Type

Precision Digital Video Coax (Part No. 7732LL) exceeds the transmission distance performance of Belden's standard plenum SDI/HDTV Digital Video cable (7732A) and offers the greatest distance possible on plenum coax cables for HD-SDI or 1080p/60 and 1080p/50 applications without resorting to fiber optic cable. (See Table)

Part No. 7732LL is ideal for use in:

- Television broadcast studios
- TV and video production, post-production facilities and field applications
- HD-for-film production
- Video editing, distribution and duplication

Best Physical Characteristics

The new 7732LL Plenum-Rated RG-11 Type Precision Digital Video Coax cable features a 14 AWG solid bare copper conductor, PTFE insulation, Duofoil® + 95% Tinned Copper Braid Shield, and fluorocopolymer jacket. It is available in ten colors, including Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray and Natural.


To learn more about Belden Brilliance Low Loss Plenum RG-11 Type Precision Digital Video Coax, call 1.800.BELDEN.1 or visit our Website at www.belden.com.

Precision Video Cable Low Loss Serial Digital Coax RG-11/U Type, CMP Rated

| 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/ 100Ft. | dB/ 100m |

RG-11/U Type • 14 AWG Solid .064" Bare Copper Conductor • Duofoil (100% Coverage) + Tinned Copper Braid Shield (95% Coverage)

Plenum • PTFE Insulation • Fluorocopolymer Jacket (Available in 10 colors)*

| | | | | | | | | | | | | | | | | | | | |
|--|---------------|---------|------|-------|------|------|---------|------|------|----------|------|------|----|----|------|------|------|------|------|
| SDI/HDTV | 7732LL | NEC: | 500 | 152.4 | 45.0 | 20.5 | 14 AWG | .276 | 7.01 | Duofoil | .345 | 8.76 | 75 | 83 | 16.3 | 53.5 | 1 | .1 | .03 |
| Digital Video | | CMP: | 1000 | 304.8 | 90.0 | 40.8 | (solid) | | | + 95% | | | | | | | 3.6 | .3 | 1.0 |
| 150° C | | CEC: | | | | | .064" | | | TC Braid | | | | | | | 10 | .5 | 1.6 |
|  | | CMP FT6 | | | | | BC | | | 1.6 /M' | | | | | | | 71.5 | 1.3 | 4.1 |
| | | | | | | | 2.5 /M' | | | 5.3 /km | | | | | | | 135 | 1.7 | 5.4 |
| | | | | | | | 8.2 /km | | | | | | | | | | 270 | 2.3 | 7.4 |
| | | | | | | | | | | | | | | | | | 360 | 2.7 | 8.7 |
| | | | | | | | | | | | | | | | | | 540 | 3.3 | 10.7 |
| | | | | | | | | | | | | | | | | | 720 | 3.8 | 12.5 |
| | | | | | | | | | | | | | | | | | 750 | 3.9 | 12.7 |
| | | | | | | | | | | | | | | | | | 1000 | 4.5 | 14.9 |
| | | | | | | | | | | | | | | | | | 1500 | 5.7 | 18.5 |
| | | | | | | | | | | | | | | | | | 2250 | 7.0 | 22.9 |
| | | | | | | | | | | | | | | | | | 3000 | 8.2 | 26.8 |
| | | | | | | | | | | | | | | | | | 4500 | 10.2 | 33.5 |

BC = Bare Copper • DCR = DC Resistance • PTFE = Polytetrafluoroethylene

* Available in Black, Brown, Red, Orange, Yellow, Green, Blue, Violet, Gray and Natural

Maximum Transmission Distance at Serial Digital Data Rates

| Data Rate: | 143 Mb/s | | 177 Mb/s | | 270 Mb/s | | 360 Mb/s | | 1.5 Gb/s | | 3.0 Gb/s | |
|-------------------|-------------------------|-----|------------------------|-----|------------------|-----|-------------------|-----|------------|-----|----------------------|-----|
| Spec: | SMPTE 259M | | ITU-R BT. 601 | | SMPTE 259M | | SMPTE 259M | | SMPTE 292M | | SMPTE 424M | |
| Cable Part Number | Composite SD-SDI (NTSC) | | Composite SD-SDI (PAL) | | Component SD-SDI | | Widescreen SD-SDI | | HD-SDI | | 1080p/50 1080p/60 | |
| | Ft. | m | Ft. | m | Ft. | m | Ft. | m | Ft. | m | Ft. | m |
| 7731A | 2752 | 839 | 2479 | 756 | 2041 | 622 | 1775 | 541 | 546 | 166 | 364 | 111 |
| 7732A | 2419 | 737 | 2143 | 653 | 1685 | 514 | 1435 | 437 | 427 | 130 | 289 | 88 |
| 7732LL | 2400 | 732 | 2202 | 671 | 1818 | 554 | 1580 | 482 | 515 | 157 | 354 | 108 |

The serial digital interconnect standards are designed to operate where the signal loss at 1/2 the clock frequency does not exceed the approximate loss values listed below.

The maximum length values shown are based on typical attenuation values for the cables listed and the following criteria:

Maximum length = 30 dB loss at 1/2 the clock frequency: SMPTE 259M, PAL, Widescreen.

Maximum length = 20 dB loss at 1/2 the clock frequency: SMPTE 292M and SMPTE 424M.

The bit error rate (BER) can vary dramatically as the calculated distances are approached. BER is dependent on receiver design and the losses of the actual coax used.

Distribution and routing equipment manufacturers should be contacted to verify their maximum recommended transmission.