



For more Information  
please call

1-800-Belden1



## Description:

Belden's .050" pitch, color-coded PVC flat cable allows for quick identification and circuit tracing, along with easy breakouts for circuit routing, and is designed for mass-termination with standard IDC connectors.

## Physical Characteristics (Overall)

### Conductor

#### AWG:

# Conductors	AWG	Stranding	Conductor Material
40	28	7x36	TC - Tinned Copper

Conductor Spacing Center to Center: .050 +/- .005

Conductor Spacing Outside Center to Outside Center: 1.95 +/- .015

### Insulation

#### Insulation Material:

Insulation Material	Wall Thickness (in.)
PVC - Polyvinyl Chloride	0.005

Insulation Resistance: >10, 000 Mega Ohms

#### Insulation Color Code Chart:

Number	Color
1	Brown
2	Red
3	Orange
4	Yellow
5	Green
6	Blue
7	Purple
8	Gray
9	White
10	Black
Over 10 conductors	Repeat as required

### Outer Shield

#### Outer Shield Material:

Outer Shield Material
Unshielded

### Outer Jacket

#### Outer Jacket Material:

Outer Jacket Material
Clear PVC

### Overall Cable

Overall Nominal Thickness: .036 +/- .002

Overall Nominal Width: 2.00

## Mechanical Characteristics (Overall)

## 9R28040 Flat - Rainbow 9R280XX Series

Operating Temperature Range: -20°C To +105°C

Bulk Cable Weight: 52 lbs/1000 ft.

### Applicable Specifications and Agency Compliance (Overall)

#### Applicable Standards & Environmental Programs

UL Rating: AWM 20932, 105°C, 300 V RMS, VW-1

EU CE Mark: Yes

EU Directive 2000/53/EC (ELV): Yes

EU Directive 2002/95/EC (RoHS): Yes

EU RoHS Compliance Date (mm/dd/yyyy): 10/01/2005

EU Directive 2002/96/EC (WEEE): Yes

EU Directive 2003/11/EC (BFR): Yes

CA Prop 65 (CJ for Wire & Cable): Yes

MII Order #39 (China RoHS): Yes

#### Flame Test

UL Flame Test: VW-1

#### Plenum/Non-Plenum

Plenum (Y/N): No

### Electrical Characteristics (Overall)

#### Nom. Characteristic Impedance:

Description	Impedance (Ohm)
(GS)	150
(GSG)	105

#### Nom. Inductance:

Description	Inductance (µH/ft)
@ 1 MHz (GS)	.29
@ 1 MHz (GSG)	.20

#### Nom. Capacitance Conductor to Conductor:

Description	Capacitance (pF/ft)
@ 1 kHz (GSG)	18
@ 1 MHz (GS)	10
@ 1 MHz (GSG)	15

#### Nominal Velocity of Propagation:

Description	VP (%)
	72

#### Nominal Delay:

Delay (ns/ft)
1.40 NS/FT. (GSG)

#### Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
68.2 OHMS/1000 FT. MAX.

#### Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/100 ft.)
10	2.8
20	4.8
30	6.5
40	8.3
50	9.8
60	12
70	13
80	14

90	15.8
100	17

**Max. Operating Voltage - UL:**

<b>Voltage</b>
300 V RMS

**Max. Recommended Current:**

<b>Current</b>
1 Amp per conductor @ 20°C

**Dielectric Withstand Voltage:** 2, 000 V RMS

**Typical Unbalanced Crosstalk:**

Description	Pulse Rise Time (NS) (MHz)	Near End % (MHz)	Far End % (MHz)
10 ft. sample length	3	4.8	7
10 ft. sample length	5	3.5	4.7
10 ft. sample length	7	3	3

**Notes (Overall)**

**Notes:** GS=Ground-Signal Mode; GSG=Ground-Signal-Ground Mode

**Related Documents:**

No related documents are available for this product

**Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9R28040 000100	100 FT	4.400 LB	NONE		40 #28 PVC RAINBOW

Revision Number: 2    Revision Date: 09-11-2009

© 2012 Belden, Inc  
 All Rights Reserved.

Although Belden makes every reasonable effort to ensure their accuracy at the time of this publication, information and specifications described herein are subject to error or omission and to change without notice, and the listing of such information and specifications does not ensure product availability.

Belden provides the information and specifications herein on an "AS IS" basis, with no representations or warranties, whether express, statutory or implied. In no event will Belden be liable for any damages (including consequential, indirect, incidental, special, punitive, or exemplary damages) whatsoever, even if Belden has been advised of the possibility of such damages, whether in an action under contract, negligence or any other theory, arising out of or in connection with the use, or inability to use, the information or specifications described herein.

All sales of Belden products are subject to Belden's standard terms and conditions of sale.

Belden believes this product to be in compliance with EU RoHS (Directive 2002/95/EC, 27-Jan-2003). Material manufactured prior to the compliance date may be in stock at Belden facilities and in our Distributor's inventory. The information provided in this Product Disclosure, and the identification of materials listed as reportable or restricted within the Product Disclosure, is correct to the best of Belden's knowledge, information, and belief at the date of its publication. The information provided in this Product Disclosure is designed only as a general guide for the safe handling, storage, and any other operation of the product itself or the one that it becomes a part of. This Product Disclosure is not to be considered a warranty or quality specification. Regulatory information is for guidance purposes only. Product users are responsible for determining the applicability of legislation and regulations based on their individual usage of the product.

Belden declares this product to be in compliance with EU LVD (Low Voltage Directive 73/23/EEC), as amended by directive 93/68/EEC.