



# Patch Cords G657A1

Yellow or blue

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## Features

- G657A1 bend-resistant fiber for safe installations
- Compatible with G652D networks
- Halogen-free flame-retardant material (HFFR)
- Lowest insertion loss
- Various connector options

## Application

The TSR 395+ series is designed to meet the standards mainly used in access and transport termination points. Ultra Polished Connectors (UPC) and Angled Polished Connectors (APC) ensures low insertion loss and minimal back reflection.

## Design

The TSR 395+ series has an extended operating temperature range, -30°C to +70°C. This makes them very stable over time in various environmental conditions.

The small bending radius of only 10 mm due to the G657A fiber, minimizes losses when installed or handled during installation.

The patch cords are designed with Ø 0.9 mm buffered secondary coating and have a strength member of aramid yarn. Outer jacket is made of halogen-free flame-retardant (HFFR) material giving excellent protection.

## Product Information

**Patch cord diameter:** 1,6 or 2 mm

## Technical Information

<b>Product Color</b>	Yellow
<b>Temperature, Operation [°C]</b>	-30 to +70
<b>Temperature, Storage [°C]</b>	-40 to +70
<b>Temperature, Installation [°C]</b>	-20 to +50
<b>Fiber Type</b>	G657A1
<b>Insertion Loss, max [dB]</b>	≤ 0,3
<b>Return Loss, min [dB]</b>	UPC ≥ 50, APC ≥ 60

**Conformance**

IEC 61754 series: Fiber connector interfaces

IEC 61755 series: Fiber optic connector optical interfaces

IEC 61753 series: Fiber optical interconnecting devices and passive components performance standard

IEC 61300 series: Fiber optic interconnecting devices and passive components – basic test and measurement

IEC 60794-2-50: Indoor optical fiber cables for simplex and duplex cables for use in patch cords

ITU G657A2: Characteristics of SM optical fiber

IEC 60332-3-24: Test - flame propagation of Ø 2 mm patch cables installed vertically in shafts

UL94 V-0: Flame resistance on connectors

**Technical Notes**

Insertion loss measured according to IEC61300-3-4

Return loss measured according to IEC61300-3-6

**Ordering Information**

Versions of with Cca fire rating available

**Articles 67**

Article name	Color	No. of Fibers	Layout	Bend Radius [mm]	Diameter Ø [mm]	Dimensions [mm]	Weight [kg/km]	Weight [kg]	Length [m]
Patch cord 1G657 LC/UPC-LC/UPC TSR3950112/1000	Yellow	1	LC-LC	10	2	–	0.014	0.014	1
Patch cord 1G657 LC/UPC-LC/UPC TSR3950112/2000	Yellow	1	LC-LC	10	2	–	0.018	0.018	2
Patch cord 1G657 LC/UPC-LC/UPC TSR3950112/3000	Yellow	1	LC-LC	10	2	–	0.022	0.022	3
Patch cord 1G657 LC/UPC-LC/UPC TSR3950112/4500	Yellow	1	LC-LC	10	2	–	0.03	0.03	4.5
Patch cord 1G657 LC/UPC-LC/UPC TSR3950112/5000	Yellow	1	LC-LC	10	2	–	0.03	0.03	5
Patch cord 1G657 LC/UPC-LC/UPC TSR3950112/10M	Yellow	1	LC-LC	10	2	–	0.05	0.05	10
Patch cord 1G657 SC/UPC-SC/UPC TSR3950124/1000	Yellow	1	SC-SC	10	2	–	0.014	0.014	1
Patch cord 1G657 SC/UPC-SC/UPC TSR3950124/2000	Yellow	1	SC-SC	10	2	–	0.018	0.018	2
Patch cord 1G657 SC/UPC-SC/UPC TSR3950124/3000	Yellow	1	SC-SC	10	2	–	0.022	0.022	3
Patch cord 1G657 SC/UPC-SC/UPC TSR3950124/5000	Yellow	1	SC-SC	10	2	–	0.03	0.03	5
Patch cord 1G657 SC/UPC-SC/UPC TSR3950124/10M	Yellow	1	SC-SC	10	2	–	0.05	0.05	10

Article name	Color	No. of Fibers	Layout	Bend Radius [mm]	Diameter Ø [mm]	Dimensions [mm]	Weight [kg/km]	Weight [kg]	Length [m]
Patch cord 1G657 SC/APC-SC/APC TSR3950127/1000	Yellow	1	SCA-SCA	10	2	—	0.014	0.014	1
Patch cord 1G657 SC/APC-SC/APC TSR3950127/2000	Yellow	1	SCA-SCA	10	2	—	0.018	0.018	2
Patch cord 1G657 SC/APC-SC/APC TSR3950127/3000	Yellow	1	SCA-SCA	10	2	—	0.022	0.022	3
Patch cord 1G657 SC/APC-SC/APC TSR3950127/5000	Yellow	1	SCA-SCA	10	2	—	0.03	0.03	5
Patch cord 1G657 SC/APC-SC/APC TSR3950127/10M	Yellow	1	SCA-SCA	10	2	—	0.05	0.05	10
Patch cord 1G657 LC/APC-LC/APC TSR3950134/1000	Yellow	1	LCA-LCA	10	2	—	0.009	0.009	1
Patch cord 1G657 LC/APC-LC/APC TSR3950134/2000	Yellow	1	LCA-LCA	10	2	—	0.013	0.013	2
Patch cord 1G657 LC/APC-LC/APC TSR3950134/3000	Yellow	1	LCA-LCA	10	2	—	0.017	0.017	3
Patch cord 1G657 LC/APC-LC/APC TSR3950134/5000	Yellow	1	LCA-LCA	10	2	—	0.021	0.021	5
Patch cord 1G657 LC/APC-LC/APC TSR3950134/10M	Yellow	1	LCA-LCA	10	2	—	0.048	0.048	10
Patchcord 1G657 LC/APC-SC/APC 1m TSR3950144/1000	Yellow	1	LCA-SCA	10	2	—	0.014	0.014	1
Patch cord 1G657 LC/APC-SC/APC TSR3950144/2000	Yellow	1	LCA-SCA	10	2	—	0.018	0.018	2
Patch cord 1G657 LC/APC-SC/APC TSR3950144/3000	Yellow	1	LCA-SCA	10	2	—	0.022	0.022	3
Patch cord 1G657 LC/APC-SC/APC TSR3950144/5000	Yellow	1	LCA-SCA	10	2	—	0.03	0.03	5
Patch cord 1G657 LC/APC-SC/APC TSR3950144/10M	Yellow	1	LCA-SCA	10	2	—	0.045	0.045	10
Patch cord 2G657 LC/UPC-LC/UPC TSR3950212/1000	Yellow	2	LC-LC	10	2	2 × 2	0.028	0.028	1
Patch cord 2G657 LC/UPC-LC/UPC TSR3950212/2000	Yellow	2	LC-LC	10	2	2 × 2	0.036	0.036	2
Patch cord 2G657 LC/UPC-LC/UPC TSR3950212/3000	Yellow	2	LC-LC	10	2	2 × 2	0.044	0.044	3
Patch cord 2G657 LC/UPC-LC/UPC TSR3950212/5000	Yellow	2	LC-LC	10	2	2 × 2	0.06	0.06	5
Patch cord 2G657 LC/UPC-LC/UPC TSR3950212/10M	Yellow	2	LC-LC	10	2	2 × 2	0.023	0.023	10
Patch cord 2G657 LC/UPC-SC/UPC TSR3950215/1000	Yellow	2	LC-SC	10	2	2 × 2	0.028	0.028	1
Patch cord 2G657 LC/UPC-SC/UPC TSR3950215/2000	Yellow	2	LC-SC	10	2	2 × 2	0.036	0.036	2
Patch cord 2G657 LC/UPC-SC/UPC TSR3950215/3000	Yellow	2	LC-SC	10	2	2 × 2	0.044	0.044	3
Patch cord 2G657 LC/UPC-SC/UPC TSR3950215/5000	Yellow	2	LC-SC	10	2	2 × 2	0.06	0.06	5

Article name	Color	No. of Fibers	Layout	Bend Radius [mm]	Diameter Ø [mm]	Dimensions [mm]	Weight [kg/km]	Weight [kg]	Length [m]
Patch cord 2G657 LC/UPC-SC/UPC TSR3950215/10M	Yellow	2	LC-SC	10	2	2 × 2	0.1	0.1	10
Patch cord 2G657 SC/UPC-SC/UPC TSR3950224/1000	Yellow	2	SC-SC	10	2	2 × 2	0.028	0.028	1
Patch cord 2G657 SC/UPC-SC/UPC TSR3950224/2000	Yellow	2	SC-SC	10	2	2 × 2	0.036	0.036	2
Patch cord 2G657 SC/UPC-SC/UPC TSR3950224/3000	Yellow	2	SC-SC	10	2	2 × 2	0.044	0.044	3
Patch cord 2G657 SC/UPC-SC/UPC TSR3950224/5000	Yellow	2	SC-SC	10	2	2 × 2	0.06	0.06	5
Patch cord 2G657 SC/UPC-SC/UPC TSR3950224/10M	Yellow	2	SC-SC	10	2	2 × 2	0.1	0.1	10
Patch cord 2G657 SC/APC-SC/APC TSR3950227/1000	Yellow	2	SCA-SCA	10	2	2 × 2	0.028	0.028	1
Patch cord 2G657 SC/APC-SC/APC TSR3950227/2000	Yellow	2	SCA-SCA	10	2	2 × 2	0.036	0.036	2
Patch cord 2G657 SC/APC-SC/APC TSR3950227/3000	Yellow	2	SCA-SCA	10	2	2 × 2	0.044	0.044	3
Patch cord 2G657 SC/APC-SC/APC TSR3950227/5000	Yellow	2	SCA-SCA	10	2	2 × 2	0.06	0.06	5
Patch cord 2G657 SC/APC-SC/APC TSR3950227/10M	Yellow	2	SCA-SCA	10	2	2 × 2	0.1	0.1	10
Patch cord 2G657 SC/APC-SC/APC TSR3950227/20M	Yellow	2	SCA-SCA	10	2	2 × 2	0.175	0.175	20
Patch cord 2G657 LC/APC-LC/APC TSR3950234/1000	Yellow	2	LCA-LCA	10	2	2 × 2	0.014	0.014	1
Patch cord 2G657 LC/APC-LC/APC TSR3950234/2000	Yellow	2	LCA-LCA	10	2	2 × 2	0.018	0.018	2
Patch cord 2G657 LC/APC-LC/APC TSR3950234/3000	Yellow	2	LCA-LCA	10	2	2 × 2	0.022	0.022	3
Patch cord 2G657 LC/APC-LC/APC TSR3950234/5000	Yellow	2	LCA-LCA	10	2	2 × 2	0.03	0.03	5
Patch cord 2G657 LC/APC-LC/APC TSR3950234/10M	Yellow	2	LCA-LCA	10	2	2 × 2	0.05	0.05	10
Patch cord 2G657 SC/UPC-SC/APC TSR3950237/1000	Yellow	2	SC-SCA	10	2	2 × 2	0.028	0.028	1
Patch cord 2G657 SC/UPC-SC/APC TSR3950237/2000	Yellow	2	SC-SCA	10	2	2 × 2	0.036	0.036	2
Patch cord 2G657 SC/UPC-SC/APC TSR3950237/3000	Yellow	2	SC-SCA	10	2	2 × 2	0.044	0.044	3
Patch cord 2G657 SC/UPC-SC/APC TSR3950237/5000	Yellow	2	SC-SCA	10	2	2 × 2	0.06	0.06	5
Patch cord 2G657 SC/UPC-SC/APC TSR3950237/10M	Yellow	2	SC-SCA	10	2	2 × 2	0.1	0.1	10
Patch cord 2G657 SC/APC-LC/UPC TSR3950240/1000	Yellow	2	SCA-LC	10	2	2 × 2	0.028	0.028	1
Patch cord 2G657 SC/APC-LC/UPC TSR3950240/2000	Yellow	2	SCA-LC	10	2	2 × 2	0.036	0.036	2

Article name	Color	No. of Fibers	Layout	Bend Radius [mm]	Diameter Ø [mm]	Dimensions [mm]	Weight [kg/km]	Weight [kg]	Length [m]
Patch cord 2G657 SC/APC-LC/UPC TSR3950240/3000	Yellow	2	SCA-LC	10	2	2 × 2	0.044	0.044	3
Patch cord 2G657 SC/APC-LC/UPC TSR3950240/5000	Yellow	2	SCA-LC	10	2	2 × 2	0.06	0.06	5
Patch cord 2G657 SC/APC-LC/UPC TSR3950240/10M	Yellow	2	SCA-LC	10	2	2 × 2	0.1	0.1	10
Patch cord 2G657 SC/UPC-LC/APC TSR3950243/1000	Yellow	2	SC-LCA	10	2	2 × 2	0.028	0.028	1
Patch cord 2G657 SC/UPC-LC/APC TSR3950243/2000	Yellow	2	SC-LCA	10	2	2 × 2	0.036	0.036	2
Patch cord 2G657 SC/UPC-LC/APC TSR3950243/3000	Yellow	2	SC-LCA	10	2	2 × 2	0.044	0.044	3
Patch cord 2G657 SC/UPC-LC/APC TSR3950243/5000	Yellow	2	SC-LCA	10	2	2 × 2	0.06	0.06	5
Patch cord 2G657 SC/UPC-LC/APC TSR3950243/10M	Yellow	2	SC-LCA	10	2	2 × 2	0.1	0.1	10