

Traffic Safety Corporation 2708 47th Ave.

Sacramento, CA 95822-3806 Toll Free: 888.446.9255

Tel: 916.394.9884 Fax: 916.394.2809 Email: sales@xwalk.com Web: www.xwalk.com

TS-SR-20C Hardwired LED Road Stud

#### **Features**

- Appropriate for regular traffic zones and areas of poor visibility.
- Ideal for road delineation, bends/ curves, crosswalks among others applications.
- Only .59" (15mm) above road surface.
- High brightness during day and night.
- Low maintenance, 100% waterproof.
- Connect multiple road studs in series circuit.
- Wired system that can be powered by electric or solar energy.
- Low power consumption.
- Internal prismatic system.
- Up to .62 mile (1 km) visibility distance due to high intensity LEDs.
- Many LED color options available for a wide variety of applications.
- Optional hard anodizing or powder coating available for top of road stud.



#### **Modes of Operation:**

• Always On (other modes of operation like flashing or sequential are available with external controller)

#### **LED Configuration:**

· Unidirectional or bidirectional

#### **Electrical:**

- Power Supply: 12V DC or 24V DC
- Maximum Current Consumption: 40 mA (depends on LED configuration)
- Power Cable: Brown Wire (+), Blue Wire (-)
- Working Temperature: -13°F to +185°F (-25°C to +85°C)

#### **Optical:**

- LED Quantity:
   1 or 2 LEDs (Unidirectional)
   2 or 4 LEDs (Bidirectional)
- LED Type: 5mm
- LED Colors: White, Red, Yellow, Green, Blue
- Viewing Angle: 15°









#### Mechanical:

- Material: Aluminum and Polycarbonate
- · Mechanical Resistance: 20 tons
- Weight: 2.2 lb. (1 kg)
- Protection Index: IP68, IK10
- Dimensions: 5.67" (144mm) diameter x 3.43" (87mm) height

# **Other Versions**

# TS-SR-20CP: Hardwired Road Stud with Power LEDs:

- High visibility due to power LEDs (even in adverse weather conditions).
- Allows drivers a higher reaction time due to extended lighting range.
- Power supply: 12V DC.
- Maximum Current Consumption: 210 mA (depends on LED configuration).
- LED Quantity: 1 (Unidirectional), 2 (Bidirectional).
- Viewing angle: 16°



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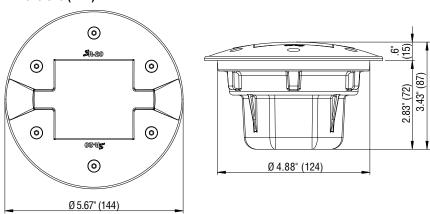


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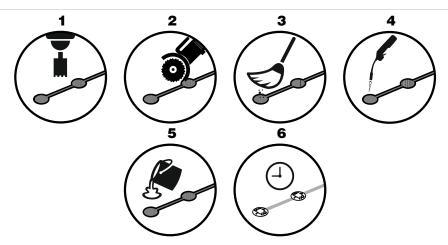
#### Dimensions (mm)



#### **Installation Procedure**



Personal protective equipment must be worn during installation process.



- **1** After deciding the location where the stud will be installed, drill a hole having a minimum diameter of 5.12" (130mm) and 3.15" (80mm) deep.
- 2 Using a disk cutter, open a connection between the holes with .6" (15mm) width and 2.36" (60mm) depth.
- 3 Brush any debris or dust from the hole resulting from drilling.
- **4** Dry the hole with a blowtorch to remove any moisture that may compromise the adhesion and effectiveness of the grout.
- **5** Pour ±4.4 lb. (±2 kg) of ULTRAFLOW 4000/8 grout in the hole and insert the stud checking that the LEDs are facing the correct direction. Remove any excess grout.
- **6** The grout drying time may change depending on weather conditions. Consult the grout data sheet for more information.

Changing or not completing the described installation process can result in suspension of warranty.



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TS-SR-20C Hardwired **LED Road Stud** 

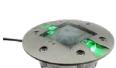
Unidirectional 1 Ll	ED
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Models	Description	Color
TS-SR-20C-U1W-S-1G	Hardwired Road Stud / 3mt Cable Included / 1 LED / Standard CAP / 1 Cable Gland	White
TS-SR-20C-U1R-S-1G	"	Red
TS-SR-20C-U1Y-S-1G	"	Yellow
TS-SR-20C-U1B-S-1G	"	Blue
TS-SR-20C-U1G-S-1G	"	Green



## **Unidirectional 2 LEDS**

Models	Description	Color
TS-SR-20C-U2W-S-1G	Hardwired Road Stud / 3mt Cable Included / 2 LED / Standard CAP / 1 Cable Gland	White
TS-SR-20C-U2R-S-1G	II .	Red
TS-SR-20C-U2Y-S-1G	II .	Yellow
TS-SR-20C-U2B-S-1G	11	Blue
TS-SR-20C-U2G-S-1G	"	Green



#### **Bidirectional 1+1 LEDS**

Models	Description	Color
TS-SR-20C-B2WW-S-1G	Hardwired Road Stud / 3mt Cable Included / 2 LED / Standard CAP / 1 Cable Gland	White / White
TS-SR-20C-B2RR-S-1G	"	Red / Red
TS-SR-20C-B2YY-S-1G	"	Yellow / Yellow
TS-SR-20C-B2BB-S-1G	"	Blue / Blue
TS-SR-20C-B2GG-S-1G	"	Green / Green



#### **Bidirectional 2+2 LEDS**

Models	Description	Color
TS-SR-20C-B4WW-S-1G	Hardwired Road Stud / 3mt Cable Included / 4 LED / Standard CAP / 1 Cable Gland	White / White
TS-SR-20C-B4RR-S-1G	"	Red / Red
TS-SR-20C-B4YY-S-1G	n .	Yellow / Yellow
TS-SR-20C-B4BB-S-1G	"	Blue / Blue
TS-SR-20C-B4GG-S-1G	n .	Green / Green



Cable standard (included): 0.75mm<sup>2</sup> wire section

Different cable layouts and length should be requested upon order!

Standard mode: Always ON. For flashing or sequential mode, a microcontroller is required.

**CAP Options:** Different CAP treatments available by request

Cable Gland: Ref. Example (Color): **Color combinations:** 

TS-SR-20C-XXXX-XX-2G Side 1 - White / Side 2 - Red TS-SR-20C-XXWR-XX-XX

2 Cable Glands





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TS-SR-20C Hardwired **LED Road Stud** 



#### **Unidirectional 1 LED**

Models Description TS-SR-20CP-U1W-S-1G Hardwired Road Stud / 3mt Cable Included / 1 LED / Standard CAP / 1 Cable Gland TS-SR-20CP-U1R-S-1G

Color White

Red Yellow

Blue Green



#### Bidirectional 1+1 LEDS

TS-SR-20CP-U1Y-S-1G TS-SR-20CP-U1B-S-1G

TS-SR-20CP-U1G-S-1G

Models Description TS-SR-20CP-B2WW-S-1G Hardwired Road Stud / 3mt Cable Included 2 LED / Standard CAP / 1 Cable Gland

TS-SR-20CP-B2RR-S-1G TS-SR-20CP-B2YY-S-1G TS-SR-20CP-B2BB-S-1G TS-SR-20CP-B2GG-S-1G

Color White / White Red / Red Yellow / Yellow Blue / Blue Green / Green

OBS.:

Cable standard (included): 0.75mm<sup>2</sup> wire section

Different cable layouts and length should be requested upon order!

Standard mode: Always ON. For flashing or sequential mode, a microcontroller is required.

Standard cable layout

**CAP Options:** 

TS-SR-20CP-XXXX-XX-2G

2 Cable Glands Side 1 - White / Side 2 - Red

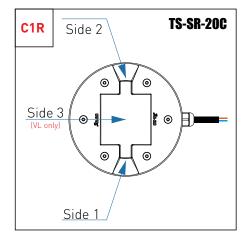
Different CAP treatments available by request

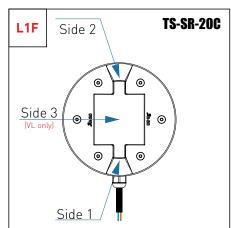
Cable Gland: Ref. Example (Color): Color combinations:

TS-SR-20CP-XXWR-XX-XX

#### **LED Configuration**

One road stud with two or more LED colors



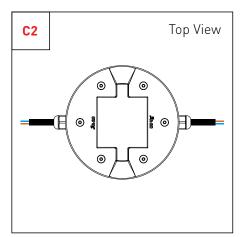


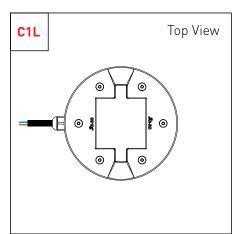
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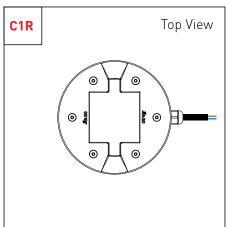


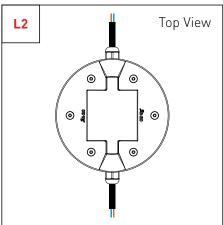
# TS-SR-20C Cable Layout

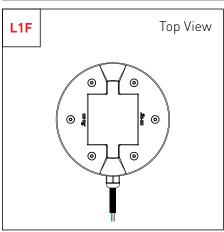


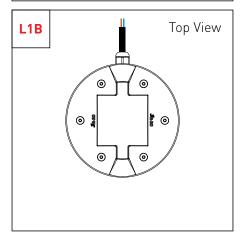


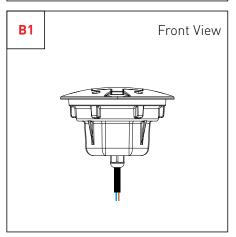


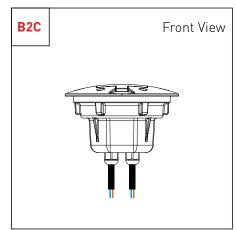


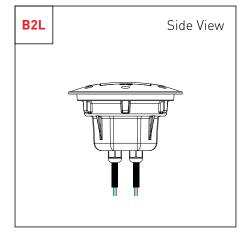












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