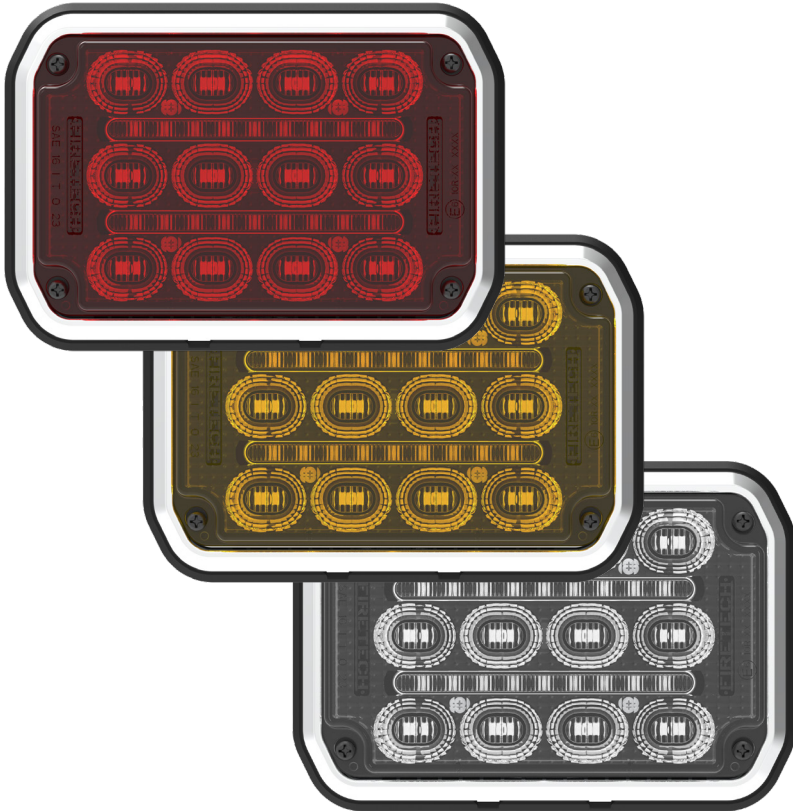




GUARDIAN JUNIOR TAIL LIGHTS

Stop/Tail Light, Turn Signal, and Backup Light

FT-TL-GSMJR-STT, FT-TL-GSMJR-TURN, & FT-TL-GSMJR-BACKUP



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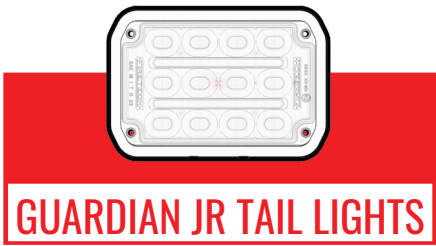
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SAFETY NOTICE & WARRANTY

WARNING: INSTALLATION MUST BE CONDUCTED BY A QUALIFIED TECHNICIAN.

IMPROPER INSTALLATION CAN RESULT IN INJURY OR DEATH.

- Installation must be conducted by a qualified automotive electrician or emergency vehicle technician in accordance with the applicable NFPA standard(s) and procedures (Including but not limited to NFPA 1901, 1906, 1911, 414, 1900)
- Improperly installed, aimed, or operated lights can create significant hazard to motorists which can result in collision. Ensure light fixtures are installed and operated such that their beam does not shine into oncoming traffic
- All circuits must be fused at 125% of the rated power consumption of the loads on the circuit
- A voltage drop greater than 10% in the power feed to a fixture could be an indicator of an under-sized conductor. Use of improperly sized conductors will, at a minimum, result in poor performance, and at a maximum could result in fire
- Verify input voltage is within fixture range before installation. Voltage range information can be found in this manual or printed on the fixture body
- The use of personal protective equipment (safety glasses and gloves) is highly recommended
- Allow proper cooling time before handling the fixture if it has been installed & powered to prevent burns
- Any modifications to the fixture will void warranty and are not authorized by the manufacturer
- Always inspect the fixture for any damage prior to installing and DO NOT install if any damage is present



PLEASE READ ALL INSTRUCTIONS BEFORE INSTALLATION

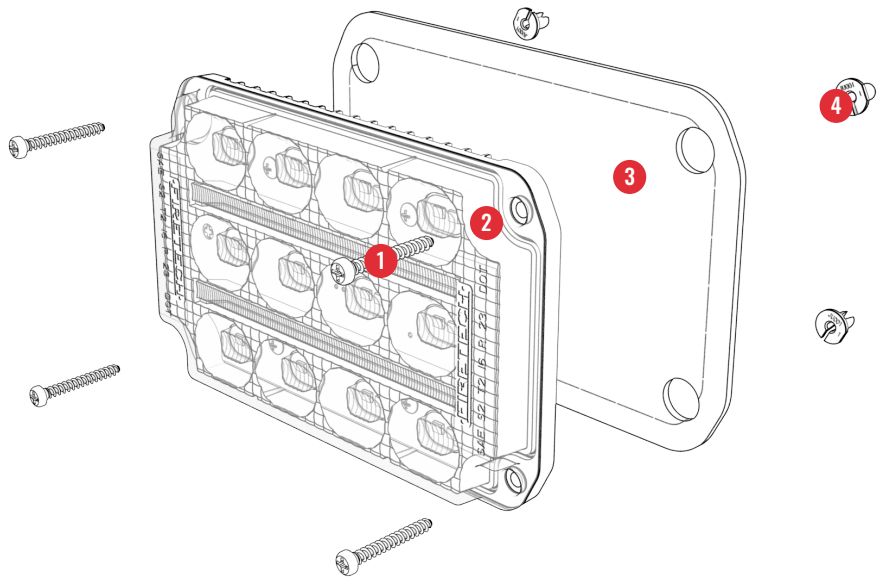


Warranty Information: Full policy available Online at www.hivizleds.com/warranty

- Proof of purchase may be required to validate warranty. All FireTech products are warranted for the useful service life of the vehicle for which they were first installed
- Improper installation, accident, physical damage, neglect, and normal wear and tear are not covered under warranty
- Lights operated in environments over 150° Fahrenheit are not covered under warranty
- All advance-exchange warranty claims must be validated with HiViz Technical Support prior to issuance of a shipping label. Failure to return defective product will result in an invoice for the full replacement value of the product
- HiViz Lighting will repair or replace defective product at its discretion. Replacement product will be in similar or better cosmetic condition than the defective part.
- Warranties should be handled through the dealer/reseller the product was purchased from; customer is responsible for delivery
- If product is found to have damage not covered under warranty, customer will be responsible for return shipping charges and/or cost of repair
- Non-warranted items can be repaired at the customer's expense of parts and labor, at the discretion of HiViz LED Lighting, who will provide an estimated repair cost before proceeding with the repair.



GUARDIAN JUNIOR TAIL LIGHT ASSEMBLY



PIECES INCLUDED

- 1** Screws (4)
- 2** Fixture (1)
- 3** Foam Gasket (1)
- 4** Isolators (4)

TOOLS REQUIRED

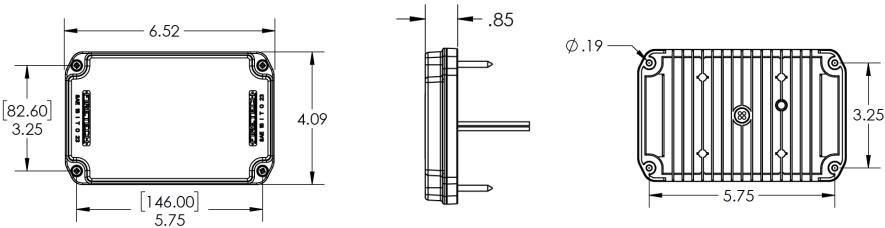
- Phillips Screwdriver
- Heat-shrink butt connectors
- Wire Strippers
- 15/64" drill bit & 3/8" drill bit

NOTE:

Tighten screws by hand/screwdriver.
Power-tools can cause damage to isolators
and cause an insecure attachment.



TECHNICAL SPECIFICATIONS

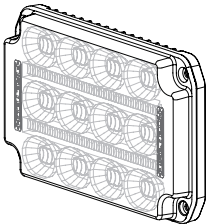


STOP/TAIL LIGHT | FT-TL-GSMJR-STT

AVG. WATTAGE	2.88W
MAX. WATTAGE	5.76W
AVG. AMPERAGE	0.24A @ 12V DC 0.12A @ 24V DC
MAX. AMPERAGE	0.48A @ 12V DC 0.24A @ 24V DC
INPUT VOLTAGE DC	10-32V DC
IP RATING	IP67 & IP69K
CERTIFICATIONS	FMVSS-108; SAE J2040; SAE J2261; SAE J585; SAE J586

TURN SIGNAL | FT-TL-GSMJR-TURN

AVG. WATTAGE	3.36W
MAX. WATTAGE	6.72W
AVG. AMPERAGE	0.28A @ 12V DC 0.14A @ 24V DC
MAX. AMPERAGE	0.56A @ 12V DC 0.28A @ 24V DC
INPUT VOLTAGE DC	10-32V DC
IP RATING	IP67 & IP69K
CERTIFICATIONS	FMVSS-108; SAE J2261; SAE J588



BACKUP LIGHT | FT-TL-GSMJR-BACKUP

MAX. WATTAGE	2.88W
MAX. AMPERAGE	0.24A @ 12V DC 0.12A @ 24V DC
INPUT VOLTAGE DC	10-32V DC
IP RATING	IP67 & IP69K
CERTIFICATIONS	FMVSS-108; SAE J593

MODELS

ITEM #	DESCRIPTION
FT-TL-GSMJR-STT	Guardian Junior Stop/Tail Light. Red Lens. Red LEDs. Dim Running Light, Bright Stop Light.
FT-TL-GSMJR-BACKUP	Guardian Junior Backup Light. Clear Lens. White LEDs. On/Off White Light.
FT-TL-GSMJR-TURN	Guardian Turn Signal Light. Amber Lens. Amber LEDs. Arrow and Other Functions.
FT-TL-GSMJR-6KIT	Complete Set of 2 Stop/Tail Lights, 2 Turn Lights, and 2 Backup Lights. Includes 6 Chrome Bezels.
FT-TL-GSMJR-TRIPLE-KIT	Complete Set of 2 Triple Tail Light Housings. Includes Stop/Tail, Turn, and Backup Lights.
FT-TL-GSMJR-QUAD-KIT	Complete Set of 2 Quad Tail Light Housings. Includes Stop/Tail, Turn, and Backup Lights.
FT-TL-GSMJR-QUAD-KIT-RED	Complete Set of 2 Triple Tail Light Housings. Includes Stop/Tail, Turn, Backup, and Red Guardian Junior Warning Lights.
FT-TL-GSMJR-QUAD-KIT-AMBER	Complete Set of 2 Triple Tail Light Housings. Includes Stop/Tail, Turn, Backup, and Amber Guardian Junior Warning Lights.
FT-TL-GSMJR-QUAD-KIT-BLUE	Complete Set of 2 Triple Tail Light Housings. Includes Stop/Tail, Turn, Backup, and Blue Guardian Junior Warning Lights.
FT-TL-HVC-GSMJR-QUAD-KIT-RED	Complete Set of 2 Triple Tail Light Housings. Includes Stop/Tail, Turn, Backup, and Red "Smart" Guardian Junior Warning Lights.
FT-TL-HVC-GSMJR-QUAD-KIT-AMBER	Complete Set of 2 Triple Tail Light Housings. Includes Stop/Tail, Turn, Backup, and Amber "Smart" Guardian Junior Warning Lights.
FT-TL-HVC-GSMJR-QUAD-KIT-BLUE	Complete Set of 2 Triple Tail Light Housings. Includes Stop/Tail, Turn, Backup, and Blue "Smart" Guardian Junior Warning Lights.



INSTALLATION INSTRUCTIONS

- 1. Make sure the battery switch **is in the off position** before beginning.
- 2. Remove old light(s) (if applicable).
- 3. Use the included foam gasket to mark your mounting holes. Use a center punch prior to drilling to prevent the bit from wandering and damaging paint.
- 5. Identify the position where you will install the fixture. Check to be sure there is no wiring or other critical infrastructure behind the mounting location (and that you have adequate access to run wiring).
- 6. Using the included foam gasket, measure and mark the holes using a permanent marker, then center punch (**measure twice, cut once**). The center hole for the wires uses a 3/8" (or 10mm) drill bit, and the holes for the screw isolators uses a 15/64 (or 6mm) drill bit.
- 7. Drill holes. Exact diameters are important for water sealing and secure mounting.
- 8. Once holes have been drilled, install the **isolators** (they prevent the mounting hardware from coming in contact with the body, preventing galvanic corrosion), a rubber mallet can be used to pop them in place.
- 9. For Turn Signal and Brake Signal, attach power and ground (see page 7 for more details), momentarily apply the yellow wire to +VDC once for selecting desired pattern. Tap the yellow wire to +VDC quickly three times to set to Flash Pattern #1 (default).

TURN SIGNAL FLASH PATTERN	
1	Steady On* (DEFAULT)
2	Sequential Slow
3	Sequential Fast
4	Sequential Slow + Steady On
5	Sequential Fast + Steady On
6	Sequential Fast + Double Blink
7	Solid Fade

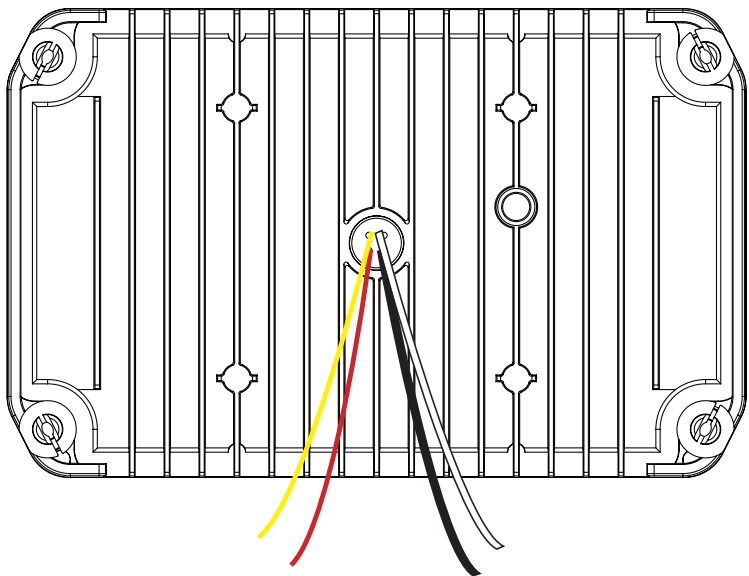
STOP / TAIL FLASH PATTEN	
1	Steady On* (DEFAULT)
2	Blink to Steady

- 10. If mounting the fixture without a bezel, tear the gasket along the perforated line and discard the unused portion.
- 11. Unless you have access to the wiring on the back side of the body sheet, next, pass the wires through the body, gasket, and bezel before making connections or installing fixture.
- 12. Connect wiring to fixture and ensure all wires are properly connected and insulated (it may be necessary to have a helper hold the light while you connect the wiring).
- 13. Align fixture with isolators and install fixture using included mounting screws. Use a manual screw driver to prevent damage to the isolators. If using a sequential mode, be sure the FT-TL-GSMJR-TURN / Turn Signal Model is facing right/left correctly. If the arrow is indicating the incorrect direction, rotate the fixture 180 degrees.

* - DOT Compliant Flash Patterns



WIRING INFORMATION



TURN SIGNAL	
WIRE	FUNCTION
BLACK	GROUND
RED	POWER FOR REAR FACING SIGNAL
WHITE	POWER FOR FORWARD FACING SIGNAL (Higher Intensity)
YELLOW	FLASH PATTERN SELECTION

STOP/TAIL LIGHT	
WIRE	FUNCTION
BLACK	GROUND
RED	POWER FOR STOP/BRAKE LIGHT
WHITE	POWER FOR TAIL/PARK LIGHT
YELLOW	FLASH PATTERN SELECTION

BACKUP LIGHT	
WIRE	FUNCTION
BLACK	GROUND
RED	POWER ON/OFF

MODEL	AMPS (@12V)	FUSE
TURN	0.56A	5A
TAIL	0.48A	5A
STOP	0.48A	5A
BACKUP	0.24A	5A

Note: Fuse size above is a recommendation. Electrical system design should be reviewed by a qualified technician.



REFERENCES



For additional information, please visit hivizleds.com



**Guardian Junior Tail
Lights Programming**

