



TRAC 12

Miniature Low Voltage Trac System

LINEAR LAMPHOLDERS & BI-PIN FLOOD

TL201, TL202, TL211, TL212 and TL103

Project: _____

Fixture Type: _____

Location: _____

Contact/Phone: _____

PRODUCT DESCRIPTION

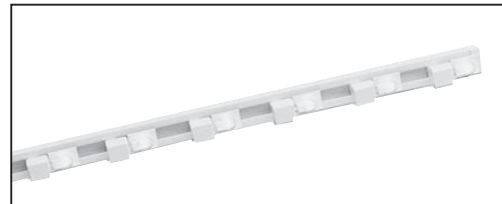
A miniature low voltage linear lighting system for undercabinet and cove applications.

Transformer Refer to specification sheets [D3.1.2](#) and [D3.1.3](#).

Trac Refer to specification sheet [D3.1.0](#).

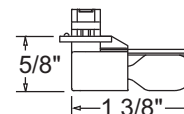
Labels UL listed, CSA certified.

Product specifications subject to change without notice.



Low Voltage T3-1/4 Single Lampholder

Wedge base lampholders are an economical choice for linear lighting applications. They have a minimal profile and produce bright, uniform illumination. They have stationary aluminum reflectors to forward project more of the 360° light from the lamp. They are compatible with wedge base lamps that are 10W or less and T3-1/4 size or smaller including xenon, LED, etc. Xenon lamps emit a white light that approximates the color of halogen, but have up to a 20,000-hour lamp life and do not require fixture lenses or special handling.

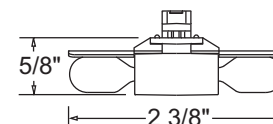


| Catalog Number | Finish | Lamp |
|----------------|--------|--|
| TL201WH | White | One T3 ¹ / ₄ , 10W max. wedge base lamp, 12V or 24V. |
| TL201BL | Black | One T3 ¹ / ₄ , 10W max. wedge base lamp, 12V or 24V. |

Low Voltage T3-1/4 Dual Lampholder

Similar to the TL201 above, but with two lamp sockets for dual lamp compatibility.

| Catalog Number | Finish | Lamp |
|----------------|--------|---|
| TL202WH | White | Two T3 ¹ / ₄ , 10W max. wedge base lamps, 12V or 24V. |
| TL202BL | Black | Two T3 ¹ / ₄ , 10W max. wedge base lamps, 12V or 24V. |



XENON T3¹/₄ WEDGE BASE LAMPS

| Catalog Number | Wattage/Volts | Finish | Initial Lumens | Life (Hours) |
|----------------|---------------|---------|----------------|--------------|
| TL900 | 3W/12V | Clear | 15 | 20,000 |
| TL901 | 5W/12V | Clear | 30 | 15,000 |
| TL903 | 10W/12V | Clear | 71 | 20,000 |
| TL905-24V | 5W/24V | Frosted | 27 | 10,000 |
| TL910-24V | 10W/24V | Frosted | 85 | 10,000 |

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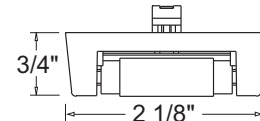
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LINEAR LAMPHOLDERS & BI-PIN FLOOD

TL201, TL202, TL211, TL212 and TL103

Low Voltage T3¹/₄ Rigid Loop Lampholder

Rigid loop lampholders are ideally suited for linear lighting applications. They have a low profile and produce bright, uniform illumination. The rigid loop lampholder includes a stationary reflector to forward project more of the 360° light from the lamp. They are compatible with rigid loop style lamps that are 10W or less and T3-1/4 size or smaller including xenon, LED, etc. Rigid loop lamps possess all of the advantages of the wedge base lamps, but offer a more symmetrical light distribution and slightly higher output that is optimal for cove lighting applications. Xenon lamps emit a white light that approximates the color of halogen, but have up to a 20,000-hour lamp life and do not require fixture lenses or special handling.



| Catalog Number | Finish | Lamp |
|----------------|--------|--|
| TL211WH | White | One T3 ¹ / ₄ , 10W max. rigid loop lamp, 12V or 24V. |
| TL211BL | Black | One T3 ¹ / ₄ , 10W max. rigid loop lamp, 12V or 24V. |

XENON T3¹/₄ RIGID LOOP LAMPS

| Catalog Number | Wattage/Volts | Finish | Initial Lumens | Life (Hours) |
|----------------|-------------------------|--------|----------------|--------------|
| TL950CL | 12V-5W Rigid Loop Lamp | Clear | 45 | 20,000 |
| TL950FR | 12V-5W Rigid Loop Lamp | Frost | 45 | 20,000 |
| TL951CL | 12V-10W Rigid Loop Lamp | Clear | 100 | 20,000 |
| TL951FR | 12V-10W Rigid Loop Lamp | Frost | 100 | 20,000 |
| TL952CL-24V | 24V-5W Rigid Loop Lamp | Clear | 40 | 20,000 |
| TL952FR-24V | 24V-5W Rigid Loop Lamp | Frost | 40 | 20,000 |
| TL953CL-24V | 24V-10W Rigid Loop Lamp | Clear | 90 | 20,000 |
| TL953FR-24V | 24V-10W Rigid Loop Lamp | Frost | 90 | 20,000 |



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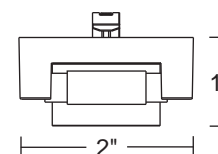
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LINEAR LAMPHOLDERS & BI-PIN FLOOD

TL201, TL202, TL211, TL212 and TL103

Low Voltage T3¹/₄ Festoon Lampholder

Festoon lampholders are ideally suited for linear lighting applications. They have a low profile and produce bright, uniform illumination. The festoon lampholder includes an articulating reflector, enabling more precise aiming of the light. They are compatible with festoon type lamps that are 10W or less and T3-1/4 size or smaller including xenon, LED, etc. The festoon lamp is similar to the rigid loop lamp, though more widely available and offering slightly greater light output. Xenon lamps emit a white light that approximates the color of halogen, but have up to a 20,000-hour lamp life and do not require fixture lenses or special handling.



| Catalog Number | Finish | Lamp |
|----------------|--------|---|
| TL212WH | White | One T3 ¹ / ₄ , 10W max. festoon lamp, 12V or 24V. |
| TL212BL | Black | One T3 ¹ / ₄ , 10W max. festoon lamp, 12V or 24V. |

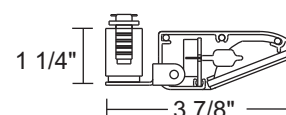
XENON T3¹/₄ FESTOON LAMPS

| Catalog Number | Wattage/Volts | Finish | Initial Lumens | Life (Hours) |
|----------------|----------------------|--------|----------------|--------------|
| TL960CL | 12V-5W Festoon Lamp | Clear | 50 | 20,000 |
| TL960FR | 12V-5W Festoon Lamp | Frost | 50 | 20,000 |
| TL961CL | 12V-10W Festoon Lamp | Clear | 120 | 20,000 |
| TL961FR | 12V-10W Festoon Lamp | Frost | 120 | 20,000 |
| TL964CL-24V | 24V-5W Festoon Lamp | Clear | 50 | 20,000 |
| TL964FR-24V | 24V-5W Festoon Lamp | Frost | 50 | 20,000 |
| TL965CL-24V | 24V-10W Festoon Lamp | Clear | 120 | 20,000 |
| TL965FR-24V | 24V-10W Festoon Lamp | Frost | 120 | 20,000 |

Low Voltage T3 Bi-Pin Flood

Lens Slide-on frosted lens enables lamp replacement without tools.

| Catalog Number | Finish | Lamp |
|----------------|--------|--|
| TL103WH | White | One T3, 20W max. bi-pin lamp, 12V or 24V |
| TL103BL | Black | One T3, 20W max. bi-pin lamp, 12V or 24V |



HALOGEN T3 BI-PIN LAMPS

Description Clear 12 volt or 24 volt T3 bi-pin halogen lamps.

| Catalog Number | Wattage/Volts | Initial Lumens | Life (Hours) |
|----------------|---------------|----------------|--------------|
| TL922 | 10W/12V | 130 | 2,000 |
| TL923 | 20W/12V | 350 | 2,000 |
| TL924-24V | 20W/24V | 288 | 1,000 |

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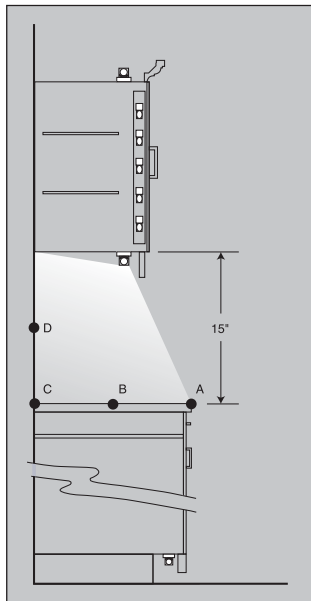
TL201, TL202, TL211, TL212 and TL103

Cabinetry Lighting Guidelines

Over Cabinets The Trac 12® system, using 10-watt lamps spaced 6" on center, generally provides excellent indirect lighting. For lower-level mood lighting, use 3-watt or 5-watt lamps with slightly closer spacing. Placing the fixture at the front edge of the cabinet top will project light into the space and illuminate any displayed objects. Locate top of lamp even with top edge of cove molding to prevent a harsh shadow line.

Inside Cabinets Running the Trac 12 system vertical on the front inside of cabinets avoids the need to put trac on each shelf. 3-watt Xenon lamps 3" on center will generally provide adequate lighting inside a cabinet.

Under Cabinets Placing the Juno Trac 12 system at the front lip of the cabinet conceals the fixture from view, minimizes veiling reflections, and provides maximum light on the working area of the countertop.



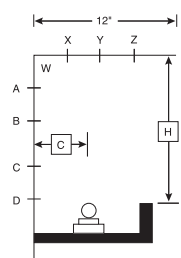
Footcandles on Horizontal Work Surface

| Lamp Type | Catalog Number | Number of Lamps | Volts/Watts | On-Center Spacing | Footcandles | | | |
|------------------|----------------|-----------------|-------------|-------------------|-------------|----|----|----|
| | | | | | A | B | C | D |
| Xenon Wedge Base | TL201 | 1 | 12V/5W | 3" | 10 | 31 | 20 | 22 |
| | | 1 | 12V/10W | 6" | 12 | 36 | 23 | 25 |
| | TL202 | 2 | 12V/5W | 6" | 10 | 29 | 18 | 20 |
| | | 2 | 12V/10W | 12" | 12 | 36 | 23 | 25 |
| Xenon Rigid Loop | TL211 | 1 | 12V/5W | 3" | 14 | 42 | 27 | 30 |
| | | 1 | 12V/10W | 6" | 14 | 43 | 28 | 30 |
| Xenon Festoon | TL212 | 1 | 12V/5W | 3" | 16 | 47 | 30 | 33 |
| | | 1 | 12V/10W | 6" | 16 | 48 | 31 | 33 |
| Halogen Bi-Pin | TL103 | 1 | 12V/20W | 12" | 16 | 66 | 56 | 60 |

Kick Spaces 3-watt Xenon lamps spaced on 4" centers provide adequate kick space lighting. Wider spacings can be used when the distance from trac to floor is greater than 4" or when even illumination is not required.

NOTE: Shiny flooring may cause lamp image reflections.

Cove Lighting



Placement Guidelines
 1. For uniform illumination o.c. lamp spacing must be equal to or less than lamp spacing from wall "C"

Footcandles on Horizontal and Vertical Planes (Test conducted with 70% reflectances at 23.5 volts)

| Lamp Type | Lamp Spacing from Wall [C] | O.C. Lamp Spacing | Cove Height [H] | Footcandles on Vert. Plane (Wall) | | | | Footcandles on Horiz. Plane (Ceiling) | | | |
|--|----------------------------|-------------------|-----------------|-----------------------------------|-----|-----|----|---------------------------------------|-----|----|----|
| | | | | A | B | C | D | W | X | Y | Z |
| 24V, 10W Rigid Loop or Wedge Base Xenon Lamp | 3" | 3" | 6" | 111 | 155 | 162 | 31 | 176 | 164 | 93 | 44 |
| | 3" | 3" | 9" | 62 | 89 | 155 | 21 | 118 | 121 | 93 | 54 |
| | 3" | 3" | 12" | 42 | 56 | 120 | 15 | 83 | 87 | 78 | 56 |
| | 4" | 4" | 6" | 88 | 111 | 105 | 23 | 124 | 123 | 85 | 38 |
| Conversion factors for other lamps | LAMP MULTIPLIER | | | | | | | | | | |
| | 12V, 10W Festoon | 1.33 | | | | | | | | | |
| | 12V, 10W Rigid Loop | 1.11 | | | | | | | | | |
| | 12V, 10W Wedge Base | 0.92 | | | | | | | | | |
| | 24V, 5W Rigid Loop | 0.44 | | | | | | | | | |
| | 24V, 5W Wedge Base | 0.32 | | | | | | | | | |
| 12V, 5W Rigid Loop | 0.50 | | | | | | | | | | |
| 12V, 5W Wedge Base | 0.37 | | | | | | | | | | |

NOTE: Frosted lamps typically provide slightly less lumen output, but more uniformity with wider spacings.

Maximum Run Length per 20 Amp Circuit

| Lamp Type | Lumens/Foot (24V Lamp) | Lamp Spacing | | | | |
|----------------------------|------------------------|--------------|-----|-----|-----|-----|
| | | 2" | 3" | 4" | 5" | 6" |
| 10 Watt Xenon Lamps | Lumens/Foot (24V Lamp) | - | 340 | 255 | 204 | 170 |
| | Maximum Run Length-24V | - | 12' | 16' | 20' | 24' |
| | Maximum Run Length-12V | - | 6' | 8' | 10' | 12' |
| 5 Watt Xenon Lamps | Lumens/Foot (24V Lamp) | 162 | 108 | 81 | 65 | 54 |
| | Maximum Run Length-24V | 16' | 24' | 32' | 40' | 48' |
| | Maximum Run Length-12V | 8' | 12' | 16' | 20' | 24' |
| 3 Watt Xenon Lamps | Lumens/Foot | 93 | 62 | 42 | 37 | 31 |
| | Maximum Run Length-12V | 13' | 20' | 27' | 33' | 40' |

Maximum Run Length per 25 Amp Circuit

| Lamp Type | Lumens/Foot (24V Lamp) | Lamp Spacing | | | | |
|----------------------------|------------------------|--------------|------|-----|-------|-----|
| | | 2" | 3" | 4" | 5" | 6" |
| 10 Watt Xenon Lamps | Lumens/Foot (24V Lamp) | - | 340 | 255 | 204 | 170 |
| | Maximum Run Length-24V | 10' | 15' | 20' | 25' | 30' |
| | Maximum Run Length-12V | 5' | 7.5' | 10' | 12.5' | 15' |
| 5 Watt Xenon Lamps | Lumens/Foot (24V Lamp) | 162 | 108 | 81 | 65 | 54 |
| | Maximum Run Length-24V | 20' | 30' | 40' | 50' | 60' |
| | Maximum Run Length-12V | 10' | 15' | 20' | 25' | 30' |
| 3 Watt Xenon Lamps | Lumens/Foot | 93 | 62 | 42 | 37 | 31 |
| | Maximum Run Length-12V | 17' | 25' | 34' | 42' | 50' |

