



Project: _____

Fixture Type: _____

Location: _____

Contact/Phone: _____

TRAC 12

Miniature Low Voltage Trac System

LED MODULE 12-VOLT AC

**TL214LEDX1-22K, TL214LEDX2-22K, TL214LEDX3-22K,
TL214LED-27K, TL214LED-3K, TL214LED-35K
and TL214LED-4K**

PRODUCT DESCRIPTION

Miniature LED module approximates the lumen output and light distribution of 5W-10W xenon lamps, utilizing approximately 1/8 of the energy and having a rated life of 50,000 hours. Available in 2200K, 2700K, 3000K, 3500K and 4000K color temperatures, the white-light TL214LED Series is compatible with standard Trac 12 and Trac 12/25 trac, operating with 12V AC power. The modules can be placed anywhere along the Trac, and the trac can be cut-to-length during installation, making Trac 12 LED Modules the most flexible linear lighting choice.

PRODUCT SPECIFICATIONS

LED High performance LEDs provide outstanding reliability, performance and color quality/consistency • 2200K, 2700K, 3000K, 3500K or 4000K white phosphor low power LED designed to operate using 12-volt AC input • 85 CRI typical
• Chromaticity range within 3-step MacAdam ellipses

Housing High temperature polycarbonate • Color-neutral, natural finish • Lightly diffused lens to optimize light dispersion.

Electrical Contacts Tempered phosphor bronze.

Trac Refer to specification sheets [D3.1.0](#) and [D3.1.1](#).

Transformers/Drivers Compatible with all 12VAC Trac 12 and Trac 12/25 Remote Mount Magnetic Transformers – refer to specification sheets [D3.1.3](#) and [D3.1.6](#) and [D3.1.10](#)
• Compatible with all 12VAC TL601E and TL602E Electronic Drivers – refer to specification sheets [D3.1.8](#) and [D3.1.9](#).

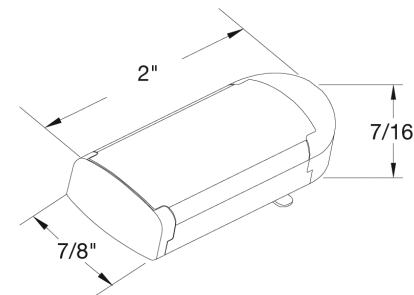
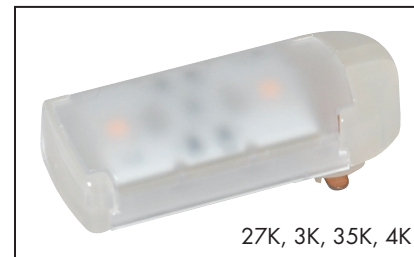
Dimming May be dimmed with dimmers tested and qualified by Juno for use with the non-resistive TL214LED Series load – see transformer/driver specifications for compatible dimmers
• Color temperature remains constant over dimming range
• Consult factory for additional dimming information.

Warranty Warranty period is 5 years from date of purchase for LED components • Standard Juno Lighting Group product guarantee terms and conditions apply • Continuously operating the TL214LED above 12VAC will void the warranty.

Labels UL/cUL Listed.

Product specifications subject to change without notice.

DIMENSIONS



PRODUCT CODES

Catalog Number	Wattage (Nominal)	Color Temperature
TL214LEDX1-22K	0.5W	2200K
TL214LEDX2-22K	1.0W	2200K
TL214LEDX3-22K	1.5W	2200K
TL214LED-27K	1.5W	2700K
TL214LED-3K	1.5W	3000K
TL214LED-35K	1.5W	3500K
TL214LED-4K	1.5W	4000K

PERFORMANCE DATA¹

Catalog Number	Input Voltage	Watts (Nominal)	Efficacy (LPW)	Rated Life (Hours)
TL214LEDX1-22K	12.0V	0.5W	20	50,000
TL214LEDX2-22K	12.0V	1.0W	40	50,000
TL214LEDX3-22K	12.0V	1.5W	56	50,000
TL214LED-27K	12.0V	1.5W	76	50,000
TL214LED-3K	12.0V	1.5W	78	50,000
TL214LED-35K	12.0V	1.5W	79	50,000
TL214LED-4K	12.0V	1.5W	80	50,000

¹Performance data, including Rated Life, is based on measurements of an individual module operating in a 25°C ambient. In practice, multiple modules used in a system will average slightly lower power consumption due to voltage drop within the system.

Note: For operation at 11.5 volts multiply Lumens by 0.94.

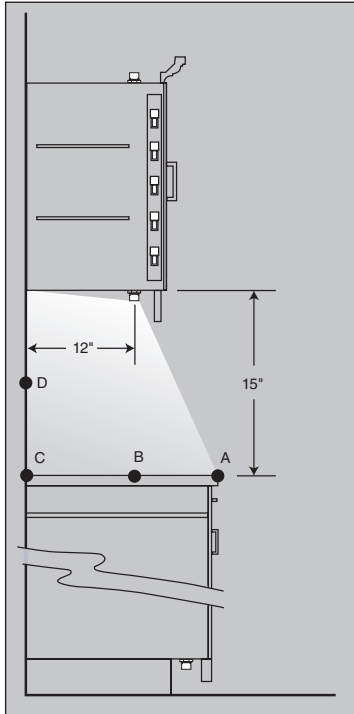
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Cabinetry Lighting Guidelines



Over Cabinets Trac 12, using modules spaced 6" on-center, generally provides excellent indirect lighting. For lower-level mood lighting, closer module spacing and dimming is recommended. 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 module even with top edge of cove molding to prevent a harsh shadow line.

Inside Cabinets Running Trac 12 vertically on the front inside of cabinets avoids the need to put trac on each shelf. Placing modules 4"-6" on-center generally provide adequate lighting inside a cabinet.

Under Cabinets Placing Juno Trac 12 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 *						
Catalog Number	Color Temp	O.C Spacing	Footcandles			
			A	B	C	D
TL214LEDX1-22K	2200K	3"	12	33	19	16
TL214LEDX2-22K	2200K	3"	24	65	39	31
TL214LEDX3-22K	2200K	3"	36	96	56	45
TL214LEDX1-22K	2200K	4"	9	25	15	12
TL214LEDX2-22K	2200K	4"	18	49	30	24
TL214LEDX3-22K	2200K	4"	27	72	42	34
TL214LED-27K	2700K	3"	49	127	73	63
TL214LED-3K	3000K	3"	50	134	78	63
TL214LED-35K	3500K	3"	53	139	82	66
TL214LED-4K	4000K	3"	55	147	86	69
TL214LED-27K	2700K	4"	37	95	55	47
TL214LED-3K	3000K	4"	38	100	58	47
TL214LED-35K	3500K	4"	40	105	62	50
TL214LED-4K	4000K	4"	42	111	65	52

*Data shown is for operation at 12-volts. For operation at 11.5-volts, multiply by 0.94.

Kick Spaces Modules spaced 4" on-center generally provides adequate kick space lighting. Wider spacings can be used when the distance from the trac to the floor is greater than 4" or when even illumination is not required.

Note: Shiny flooring or countertops may cause lamp image reflections.

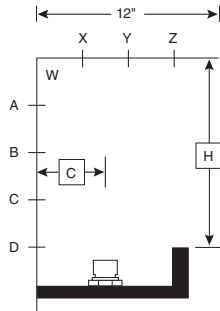
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Cove Lighting



Placement Guidelines

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

Footcandles on Vertical and Horizontal Planes *

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
TL214LEDX1-22K										
3"	3"	6"	68	78	76	57	98	116	83	48
3"	3"	9"	40	52	68	45	71	76	63	43
3"	3"	12"	25	34	58	41	53	55	49	37
4"	4"	6"	50	51	45	36	62	84	72	43
4"	4"	9"	32	37	39	27	49	56	51	37
4"	4"	12"	22	27	36	23	38	42	39	31
TL214LEDX2-22K										
3"	3"	6"	134	153	149	112	193	228	163	95
3"	3"	9"	79	101	132	89	140	150	124	84
3"	3"	12"	50	67	112	81	103	109	96	74
4"	4"	6"	98	100	89	71	122	166	142	84
4"	4"	9"	63	74	77	53	96	111	100	73
4"	4"	12"	42	54	71	45	75	83	77	61
TL214LED-3K, TL214LED-35K¹										
4"	4"	6"	200	204	181	143	248	337	288	171
4"	4"	9"	128	150	156	107	196	225	204	148
4"	4"	12"	87	110	145	92	153	168	156	125
5"	5"	6"	148	143	124	105	167	245	255	160
5"	5"	9"	103	113	107	75	141	171	169	129
5"	5"	12"	72	88	99	63	114	129	125	105

¹ For 2200K fixtures, use 0.72 multiplier, for 2700K fixtures, use 0.97 multiplier; for 4000K fixtures, use 1.02 multiplier.

LUMENS PER FOOT*

Catalog Number	Lamp Spacing			
	2"	3"	4"	6"
TL214LEDX1-22K	120	80	60	40
TL214LEDX2-22K	240	160	120	80
TL214LEDX3-22K	336	224	168	112
TL214LED-27K	456	304	228	152
TL214LED-3K	470	313	235	157
TL214LED-35K	472	315	236	157
TL214LED-4K	478	319	239	159

*Data shown is for operation at 12-volts. For operation at 11.5-volts, multiply by 0.94.

MAXIMUM TRAC RUN LENGTH**

Catalog Number	Transformer	Lamp Spacing			
		2"	3"	4"	6"
TL214LEDX1-22K	Electronic	14	17	19	24
	Magnetic	38	47	54	65
TL214LEDX2-22K	Electronic	10	11	13	15
	Magnetic	30	36	44	52
TL214LEDX3-22K	Electronic	9	12	13	16
	Magnetic	24	30	32	42
TL214LED-3K					
TL214LED-35K					
TL214LED-4K					

**Based on 20% maximum light output decrease between first and last fixture on trac due to voltage drop; to utilize full capacity of trac and transformers, individual transformer circuits may have to feed multiple runs using separate feed points.



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