



TRAC 12

Miniature Low Voltage Trac System

LED MODULE

12-VOLT AC

TL214LEDX1, TL214LEDX2 and TL214LEDX3

Project: _____

Fixture Type: _____

Location: _____

Contact/Phone: _____

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 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 Citizen Electronics package using Nichia LEDs provide outstanding reliability, performance and color quality/consistency
 • 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 • Three wattages available which deliver different lumen packages to suit a wide variety of applications.

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](#) • 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 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.

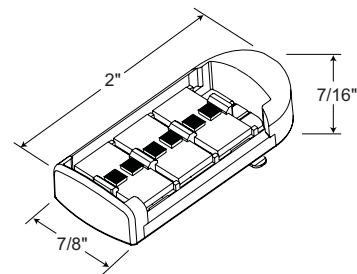
Labels UL/cUL Listed.

Product specifications subject to change without notice.

PRODUCT CODES

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

DIMENSIONS



PERFORMANCE DATA

Catalog Number	Input Voltage	Watts (Nominal)	Lumens	Efficacy (LPW)	Rated Life (Hours)
TL214LEDX1-27K	12.0V	0.5W	27	54	50,000
TL214LEDX1-3K	12.0V	0.5W	28	56	50,000
TL214LEDX1-35K	12.0V	0.5W	28	56	50,000
TL214LEDX1-4K	12.0V	0.5W	28	57	50,000
TL214LEDX2-27K	12.0V	1.0W	54	54	50,000
TL214LEDX2-3K	12.0V	1.0W	56	56	50,000
TL214LEDX2-35K	12.0V	1.0W	56	56	50,000
TL214LEDX2-4K	12.0V	1.0W	57	57	50,000
TL214LEDX3-27K	12.0V	1.5W	76	51	50,000
TL214LEDX3-3K	12.0V	1.5W	78	52	50,000
TL214LEDX3-35K	12.0V	1.5W	79	52	50,000
TL214LEDX3-4K	12.0V	1.5W	80	53	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.

TRAC 12

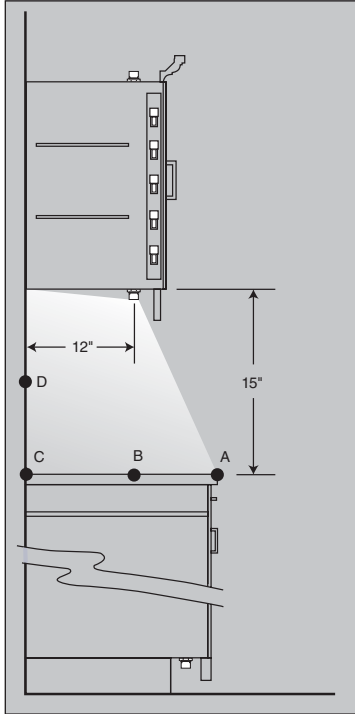
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Cabinetry Lighting Guidelines



Over Cabinets Trac 12, using TL214LEDX2 modules spaced 6" on-center, generally provides excellent indirect lighting. For lower-level mood lighting, use TL214LEDX1 modules with closer lamp 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 Trac 12 vertically on the front inside of cabinets avoids the need to put trac on each shelf. TL214LEDX1 modules placed 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 *

Cat #	Color Temp	O.C. Spacing	Footcandles			
			A	B	C	D
TL214LEDX1-27K	2700K	3"	17	45	27	22
TL214LEDX1-3K	3000K	3"	17	46	27	22
TL214LEDX1-35K	3500K	3"	18	48	28	23
TL214LEDX1-4K	4000K	3"	19	50	30	24
TL214LEDX2-27K	2700K	3"	34	90	52	43
TL214LEDX2-3K	3000K	3"	34	91	54	44
TL214LEDX2-35K	3500K	3"	34	91	54	44
TL214LEDX2-4K	4000K	3"	38	99	58	47
TL214LEDX3-27K	2700K	3"	49	127	73	59
TL214LEDX3-3K	3000K	3"	50	134	78	63
TL214LEDX3-35K	3500K	3"	53	139	82	66
TL214LEDX3-4K	4000K	3"	55	147	86	69

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

Kick Spaces TL214LEDX1 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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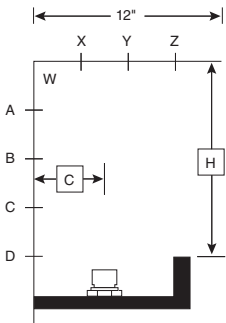
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Cove Lighting



Placement Guidelines

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

Footcandles on Vertical and Horizontal planes 3000K/3500K *

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										
3"	3"	6"	95	109	106	79	136	161	115	67
3"	3"	9"	56	72	94	63	99	106	88	60
3"	3"	12"	35	47	80	57	73	77	68	52
4"	4"	6"	69	71	63	50	86	117	100	60
4"	4"	9"	45	52	54	37	68	78	71	52
4"	4"	12"	30	38	50	32	53	58	54	43
TL214LEDX2										
3"	3"	6"	186	213	207	155	268	317	226	132
3"	3"	9"	110	140	184	124	194	209	172	117
3"	3"	12"	70	93	156	113	143	151	134	103
4"	4"	6"	136	139	124	98	169	230	197	117
4"	4"	9"	87	103	107	73	134	154	139	101
4"	4"	12"	59	75	99	63	104	115	107	85
TL214LEDX3										
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

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

LUMENS PER FOOT*

Catalog No.	Lamp Spacing			
	2"	3"	4"	6"
TL214LEDX1-27K	162	108	81	54
TL214LEDX1-3K	167	111	83	56
TL214LEDX1-35K	168	112	84	56
TL214LEDX1-4K	170	113	85	57
TL214LEDX2-27K	324	216	162	108
TL214LEDX2-3K	333	222	167	111
TL214LEDX2-35K	336	224	168	112
TL214LEDX2-4K	339	226	170	113
TL214LEDX3-27K	456	304	228	152
TL214LEDX3-3K	470	313	235	157
TL214LEDX3-35K	472	315	236	157
TL214LEDX3-4K	478	319	239	159

MAXIMUM TRAC RUN LENGTH**

Catalog No.	Transformer	Lamp Spacing			
		2"	3"	4"	6"
TL214LEDX1	Electronic	14	17	19	24
	Magnetic	38	47	54	65
TL214LEDX2	Electronic	10	11	13	15
	Magnetic	30	36	44	52
TL214LEDX3	Electronic	9	12	13	16
	Magnetic	24	30	32	42

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

** 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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