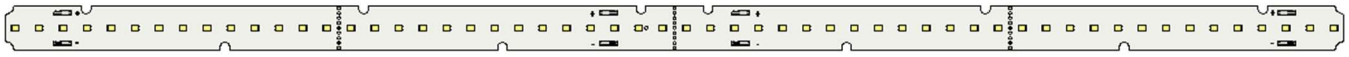
LINEAR LM 2200lm 23.7in 8xx



Product features

- Module efficacy: up to 200 lm/W
- Available with color temperature: 3000K, 3500K,4000K and 5000K
- Further color temperatures by demand
- High initial color consistency: ≤ 3 SDCM
- Average lifetime (L80 B50): >100,000 h (temperature at Tc = 55 °C)
- UL Recognized

Product family benefits

- LED module for industry and office application
- Long lifetime support
- High energy efficacy and long lifetime provide optimized total cost of ownership
- Slim width and Zhaga compliant form factor provide excellent design-in options and assembly
- Adjustable luminous flux, efficacy and lifetime
- System approach (LED Module + Driver)

Areas of application

- Industry
- Office
- Retail

Technical data

Electrical data

Parameter	Min	Typ	Max
Nominal voltage	37.9 V	38.2 V	38.5 V
Nominal current		300 mA	
Type of current		DC	
On-mode power		11.5 W	
Energy consumption in on mode		11.5 kWh/1000h	

Note: voltage tolerance +/- 0.7%

Photometrical data (simulation by Tp 45°C and nominal current 300mA)

Correlated color temperature CCT	3000 K	3500 K	4000 K	5000 K
Useful luminous flux (Φuse)	1980 … 2270 lm	2035 … 2330 lm	2110 … 2425 lm	2110 … 2425 lm
Luminous efficacy	185 lm/W	191 lm/W	198 lm/W	198 lm/W
Color Rendering Index	80	80	80	80
Colour consistency (McAdam ellipses)	< 3	< 3	< 3	< 3
R9	> 0	> 0	> 0	> 0

Note: Lumen output tolerance +/- 7%

Light technical data

Starting time	0 s
Warm-up time (60 %)	0 s
Rated beam angle	120°

Absolute ratings

Current through the LED module (I-max)	800 mA
Case temperature (Tc-max)	85 °C
Working voltage (U-max)	60 Vdc

The maximum suggested current given is for a typical non-lensed luminaire design with good thermal transfer capability. Luminaires with non-optimal thermal behavior will require a current reduction to meet the same maximum Case temperature. The thermal testing must be used to verify Tc-life is never exceeded for your specific luminaire.

LED module information

Number of LEDs per module	56

LIN-2200-830-23.7in-1R

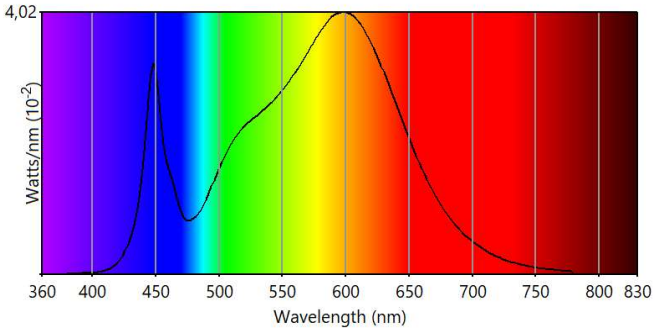
Forward Current (mA)	Forward Voltage (V)	Power Consumption (W)	Flux Output (lm)	Efficacy (lm/W)
200	37.6	7.6	1438	190
240	37.9	9.1	1715	188
280	38.1	10.1	1989	186
300	38.2	11.5	2125	185
320	38.3	12.3	2259	184
360	38.5	13.9	2528	182
400	38.7	15.5	2794	180
440	38.9	17.1	3060	178
480	39.1	18.8	3324	177
520	39.2	20.4	3589	175
560	39.4	22.1	3852	174
600	39.6	23.8	4116	173
640	39.8	25.5	4379	171
680	40.0	27.2	4642	170
720	40.2	28.9	4904	169
800	40.6	32.5	5423	167

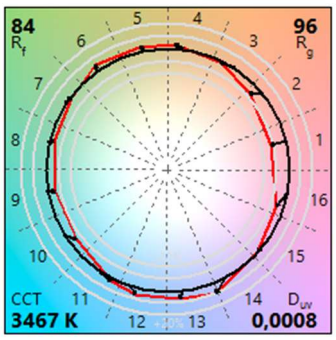
Note: voltage tolerance +/- 0.7%

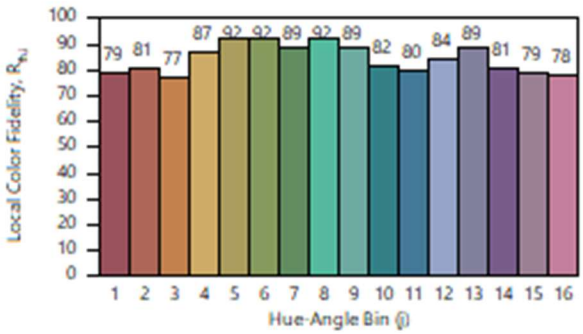
LIN-2200-835-23.7in-1R

Forward Current (mA)	Forward Voltage (V)	Power Consumption (W)	Flux Output (lm)	Efficacy (lm/W)
200	37.6	7.6	1479	197
240	37.9	9.1	1764	194
280	38.1	10.1	2045	192
300	38.2	11.5	2185	191
320	38.3	12.3	2323	190
360	38.5	13.9	2599	188
400	38.7	15.5	2873	186
440	38.9	17.1	3146	184
480	39.1	18.8	3418	182
520	39.2	20.4	3690	181
560	39.4	22.1	3961	179
600	39.6	23.8	4232	178
640	39.8	25.5	4503	177
680	40.0	27.2	4773	175
720	40.2	28.9	5043	174
800	40.6	32.5	5576	172

Note: voltage tolerance +/- 0.7%







LIN-2200-840-23.7in-1R

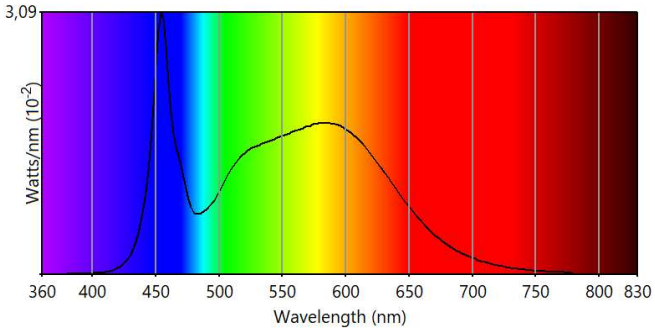
Forward Current (mA)	Forward Voltage (V)	Power Consumption (W)	Flux Output (lm)	Efficacy (lm/W)
200	37.6	7.6	1536	204
240	37.9	9.1	1832	201
280	38.1	10.1	2125	199
300	38.2	11.5	2270	198
320	38.3	12.3	2414	196
360	38.5	13.9	2700	194
400	38.7	15.5	2985	192
440	38.9	17.1	3269	191
480	39.1	18.8	3551	189
520	39.2	20.4	3834	187
560	39.4	22.1	4115	186
600	39.6	23.8	4397	184
640	39.8	25.5	4678	183
680	40.0	27.2	4959	182
720	40.2	28.9	5239	181
800	40.6	32.5	5793	178

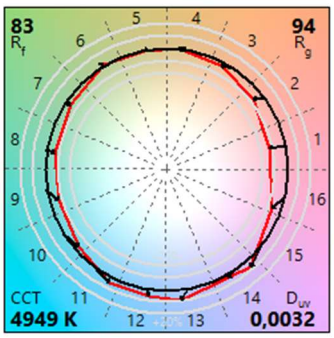
Note: voltage tolerance +/- 0.7%

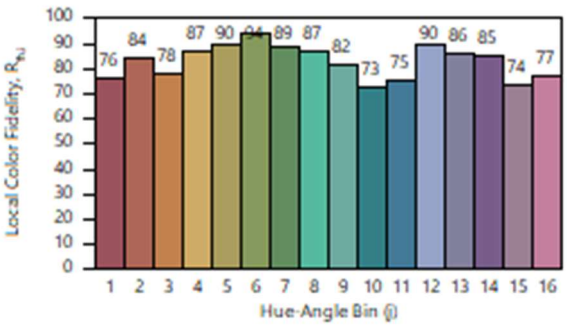
LIN-2200-850-23.7in-1R

Forward Current (mA)	Forward Voltage (V)	Power Consumption (W)	Flux Output (lm)	Efficacy (lm/W)
200	37.6	7.6	1536	204
240	37.9	9.1	1832	201
280	38.1	10.1	2125	199
300	38.2	11.5	2270	198
320	38.3	12.3	2414	196
360	38.5	13.9	2700	194
400	38.7	15.5	2985	192
440	38.9	17.1	3269	191
480	39.1	18.8	3551	189
520	39.2	20.4	3834	187
560	39.4	22.1	4115	186
600	39.6	23.8	4397	184
640	39.8	25.5	4678	183
680	40.0	27.2	4959	182
720	40.2	28.9	5239	181
800	40.6	32.5	5793	178

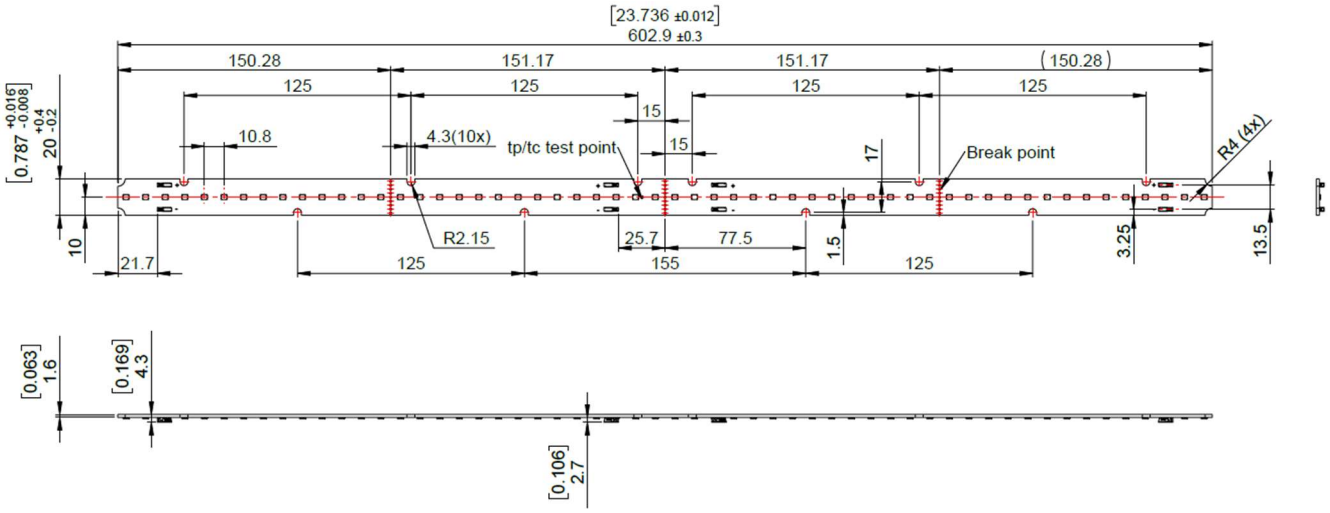
Note: voltage tolerance +/- 0.7%







Dimensions & weight



Product weight	40 g
Height	0.17 inch (5 mm)
Length	23.7 inch (603 mm)
Width	0.79 inch (20 mm)

Temperatures & operating conditions

Performance temp. acc. to IEC 62717	45 °C
Maximum temperature at tc test point	85 °C
Temperature range at storage	-30…85 °C
Ambient temperature range	-20...+75 °C

Wiring

Input wire cross section	0.20 … 0.75 mm² (AWG 18…24)	Solid wires
	0.20 … 0.50 mm² (AWG 20…24)	Stranded, tinned wires
	0.20 … 0.75 mm² (AWG 18…24)	Stranded wires
Strip length	7.5 … 9.5 mm	
Recommended tool for contact opening	BJB 46.110.U801-0	

Lifespan

Number of switching cycles	100000
Lumen maintenance factor LMF	96
L70B50 lifetime	100000 h

Lumen maintenance

		Operation current	LxBy					
		x	70		80		90	
		y	10	50	10	50	10	50
tc [°C] =	45	I = 300 mA	100000	100000	100000	100000	63000	71000
		I = 400 mA	100000	100000	100000	100000	62000	70000
		I = 500 mA	100000	100000	100000	100000	61000	69000
		I = 600 mA	100000	100000	100000	100000	60000	68000
		I = 700 mA	100000	100000	100000	100000	59000	66000
		I = 800 mA	100000	100000	100000	100000	58000	66000
tc [°C] =	55	I = 300 mA	100000	100000	100000	100000	56000	64000
		I = 400 mA	100000	100000	100000	100000	56000	63000
		I = 500 mA	100000	100000	100000	100000	54000	62000
		I = 600 mA	100000	100000	100000	100000	54000	61000
		I = 700 mA	100000	100000	100000	100000	53000	60000
		I = 800 mA	100000	100000	100000	100000	52000	59000
tc [°C] =	65	I = 300 mA	100000	100000	100000	100000	51000	57000
		I = 400 mA	100000	100000	100000	100000	50000	57000
		I = 500 mA	100000	100000	100000	100000	49000	55000
		I = 600 mA	100000	100000	99000	100000	48000	55000
		I = 700 mA	100000	100000	97000	100000	47000	54000
		I = 800 mA	100000	100000	96000	100000	47000	53000
tc [°C] =	75	I = 300 mA	100000	100000	94000	100000	46000	52000
		I = 400 mA	100000	100000	93000	100000	45000	51000
		I = 500 mA	100000	100000	91000	100000	44000	50000
		I = 600 mA	100000	100000	91000	100000	44000	50000
		I = 700 mA	100000	100000	89000	100000	43000	49000
		I = 800 mA	100000	100000	88000	100000	43000	48000
tc [°C] =	85	I = 300 mA	100000	100000	86000	100000	41000	47000
		I = 400 mA	100000	100000	85000	99000	41000	46000
		I = 500 mA	100000	100000	84000	97000	40000	46000
		I = 600 mA	100000	100000	83000	97000	40000	45000
		I = 700 mA	100000	100000	82000	95000	39000	44000
		I = 800 mA	100000	100000	81000	94000	39000	44000

Additional product data

Lighting technology used	LED

Certificates & application

Standards	UL Recognized
Environmental	RoHS/Reach
Type of protection	IP00
Overheating Protection	No
Dimming	Yes

Logistical Data

Product description	9-part number	EAN10	EAN40	Shipping Units per Box
LIN-2200-830-23.7in-1R	Tbd.	6942736260645	6942736260652	100
LIN-2200-835-23.7in-1R	9AM5434200O60-0000	6937186198501	6937186198693	100
LIN-2200-840-23.7in-1R	9AM5434300O60-0000	6937186198518	6937186198709	100
LIN-2200-850-23.7in-1R	9AM5434400O60-0000	6937186198525	6937186198716	100

The mentioned product code describes the smallest quantity unit which can be ordered. One shipping unit can contain one or more single products. When placing an order, for the quantity please enter single or multiples of a shipping unit

Safety Information:

- The LED module itself and all its components must not be mechanically stressed.

The modules are intended for operation with matching INVENTRONICS Drivers.

To also ease the luminaire/installation approval, electronic control gear for LED or LED modules should carry the UL mark.
Also check for the mark of an independent authorized certification institute.
Please see the relevant brochure for more detailed information (see "Related and Further Information")

- Installation of LED modules (with power supplies) needs to be made regarding all applicable electrical and safety standards.
  Only qualified personnel should be allowed to perform installations.
- Pay attention to standard ESD precautions when installing the module.
- Photobiological safety according to IEC/TR 62471, risk group RG 2 by nominal current
- Use the LED Modules on control-gear with max. voltage U-out < 60V.
- The LED Module can't be powered on outside the complete luminaire or without appropriate protection.

Sales and technical support:

INVENTRONICS

2825 S. Tulsa Avenue
Oklahoma City OK 73108
United States
www.inventronicsglobal.com

Sales and technical support are given by the local INVENTRONICS subsidiaries.
On our worldwide homepage all INVENTRONICS subsidiaries are listed with complete address and phone numbers.

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