HF²Narrow Stick Seamless
Compact High Intensity LED Module

The OSRAM HF²Narrow Stick Seamless LED module is an innovative module comprised of a closely packed array of small, discrete LEDs on boards under 5/8" wide. The module is designed to provide highly uniform, intense illumination and is available in 4", 10" and 12". The module is also available in a half power version.

HF²Narrow Stick Seamless modules may be conveniently connected end-to-end through the integrated 2-pin connectors. The connectors' low profile design allows for no overhang at the end of the modules. These modules are optimally paired with OSRAM OPTOTRONIC® 24 Vdc power supplies and may be dimmed using the OPTOTRONIC OT-DIM control interface.

2012 PROGRESS Report SELECTION

Key Features & Benefits

- Highly dense LED spacing creates a virtually linear light source
- Narrow profile allows for easy installation in tight spaces
- Efficacy up to 85 lm/W
- CRI of 85
- Available in full and half output versions allowing for choice and customization
- Dimmable by pulse width modulation, a method that maintains consistent color and controls lumen output
- Long life: up to 50,000 hours (L_{70}) when temperature at Tc point is maintained below 85ºC

Product Offering

Color Temperature	Power Level	Length (in.)
2700	Half	4
2700	Half	10
2700	Half	12
3000	Half	4
3000	Half	10
3000	Half	12
3500	Half	4
3500	Half	10
3500	Half	12
4000	Half	4
4000	Half	10
4000	Half	12
2700	Full	4
2700	Full	10
2700	Full	12
3000	Full	4
3000	Full	10
3000	Full	12
3500	Full	4
3500	Full	10
3500	Full	12
4000	Full	4
4000	Full	10
4000	Full	12

Application Information

Applications

- Accent lighting
- Cove lighting
- Edge lighting
- Task lighting
- Under cabinet lighting

IES files are available at www.sylvania.com and
Photopia files are available at www.ltioptics.com/sylvania

Specifications and Certifications

c UL us

The OSRAM HF²Narrow Stick Seamless is UL8750 Recognized for the US and Canada Class 2 Unit. (UL # E320662)

RoHS compliant

This light source meets restrictions on hazardous substances.

SEE THE WORLD IN A NEW LIGHT

OSRAM

Specification Data

Catalog # Type

Project

Comments

Prepared by

Ordering Information

Item Number	Ordering Abbreviation	Color Temperature	Power Level	Power (W)	No. of LEDs	Length (in.)	Voltage (V)	Current (mA)	CRI	Lumens	LPW	Lumens/ ft.	Watts/ ft.	Beam Angle
71779	L2LRE/24V/827/SMLS/4IN	2700	Half	2	12	4	24	68	85	120	75	370	5	120
71777	L4LRE/24V/827/SMLS/10IN	2700	Half	4	30	10	24	166	85	300	77	370	5	120
71793	L5LRE/24V/827/SMLS/12IN	2700	Half	5	36	12	24	201	85	370	77	370	5	120
71780	L3LRE/24V/827/SMLS/4IN	2700	Full	3	18	4	24	137	85	240	74	726	10	120
71778	L8LRE/24V/827/SMLS/10IN	2700	Full	8	42	10	24	347	85	605	74	726	10	120
71794	L10LRE/24V/827/SMLS/12IN	2700	Full	10	54	12	24	416	85	726	73	726	10	120
71783	L2LRE/24V/830/SMLS/4IN	3000	Half	2	12	4	24	68	85	120	76	380	5	120
71781	L4LRE/24V/830/SMLS/10IN	3000	Half	4	30	10	24	166	85	320	80	380	5	120
71795	L5LRE/24V/830/SMLS/12IN	3000	Half	5	36	12	24	201	85	380	79	380	5	120
71784	L3LRE/24V/830/SMLS/4IN	3000	Full	3	18	4	24	137	85	250	76	755	10	120
71782	L8LRE/24V/830/SMLS/10IN	3000	Full	8	42	10	24	347	85	630	76	755	10	120
71796	L10LRE/24V/830/SMLS/12IN	3000	Full	10	54	12	24	416	85	755	76	755	10	120
71787	L2LRE/24V/835/SMLS/4IN	3500	Half	2	12	4	24	68	85	130	79	385	5	120
71785	L4LRE/24V/835/SMLS/10IN	3500	Half	4	30	10	24	166	85	320	81	385	5	120
71797	L5LRE/24V/835/SMLS/12IN	3500	Half	5	36	12	24	201	85	385	80	385	5	120
71788	L3LRE/24V/835/SMLS/4IN	3500	Full	3	18	4	24	137	85	255	77	760	10	120
71786	L8LRE/24V/835/SMLS/10IN	3500	Full	8	42	10	24	347	85	635	76	760	10	120
71798	L10LRE/24V/835/SMLS/12IN	3500	Full	10	54	12	24	416	85	760	76	760	10	120
71791	L2LRE/24V/840/SMLS/4IN	4000	Half	2	12	4	24	68	85	135	83	410	5	120
71789	L4LRE/24V/840/SMLS/10IN	4000	Half	4	30	10	24	166	85	340	85	410	5	120
71799	L5LRE/24V/840/SMLS/12IN	4000	Half	5	36	12	24	201	85	410	85	410	5	120
71792	L3LRE/24V/840/SMLS/4IN	4000	Full	3	18	4	24	137	85	265	80	790	10	120
71790	L8LRE/24V/840/SMLS/10IN	4000	Full	8	42	10	24	347	85	660	79	790	10	120
71800	L10LRE/24V/840/SMLS/12IN	4000	Full	10	54	12	24	416	85	790	79	790	10	120

Notes:

1. All data is related to the entire module. Data reflects statistical mean values of instant on measurement. Actual data may differ depending on variances in the manufacturing process.
2. Delivered lumens per board subject to variations of 3 to 9 lumens based on LED lumen output.
3. **Dry location** use only. 4. Specifications subject to change.

Ordering Guide

L	2	L	R	E	/	24V	/	8	30	/	SMLS	/	4IN
LED	Wattage	Linear	Rigid	Engine		Voltage		CRI>85	Color Temperature 3000K		Product Family HF²Narrow Stick Seamless		Length

Power Supply Information

Maximum Number of Modules per Power Supply

	OT17 (51622)	OT20 (51512)	OT50 (51598)	OT75 (51514)	OT96D (51510)	OT96 (51626*)	OT240 (51627**)
All 4" (18 LEDs) Modules	4	5	13	20	25	25	21 / chnl
All 4" (H, 12 LEDs) Modules	9	10	26	40	51	51	42 / chnl
All 10" (42 LEDs) Modules	1	2	5	8	10	10	8 / chnl
All 10" (H, 30 LEDs) Modules	3	4	10	16	20	20	17 / chnl
All 12'' (54 LEDs) Modules	1	1	4	7	9	9	23 / chnl
All 12'' (H, 36 LEDs) Modules	3	3	9	14	19	19	47 / chnl

*Item Number # 51626 has replaced Item Number # 51511.
**Item Number # 51627 has replaced Item Number # 51515.

Notes:

1. For the 12" full power version, 6 LED modules can be operated on a single feed. For the 12" half power version, 12 LED modules can be operated on a single feed. For the 10" full power version, 7 LED modules can be operated on a single feed. For the 10" half power version, 14 LED modules can be operated on a single feed. For the 4" full power version, 18 LED modules can be operated on a single feed. For the 4" half power version, 36 LED modules can be operated on a single feed.
2. OPTOTRONIC® power supplies are optimally paired with OSRAM LED modules and are specifically designed with protection features for safe operation.
3. The module is designed to work with Constant Voltage power supplies only. Reference the Power Supply PIB #ECS050 for product specific information.
4. These values are an approximation based on the typical "power" values listed under the "Ordering Information" parameters. To accurately determine the maximum LED load, evaluate the application based on the application note "Determining the Maximum LED Load on a Constant Voltage Power Supply" LED026. This document can be found at www.sylvania.com.
5. HF²Narrow Stick Seamless modules can be dimmed when used with the OT DIM, or OTRGBDIM controllers. Because of the power consumed by these controllers, an additional de-rating of the overall "maximum" load must be factored into the above chart. To determine this de-rating (wattage) value please reference Step 8 of this same App. Note #LED026.

Accessories

Item Number	Ordering Abbreviation	Description	Length (in.)	Order Quantity
71838	LAC-C/SMLS/BB/2P/1IN	Seamless Board to Board connector	1	10
71839	LAC-C/SMLS/BWB/2P/2IN	Seamless Board to Board cable	2	10
71840	LAC-C/SMLS/BWB/2P/4IN	Seamless Board to Board cable	4	10
71841	LAC-C/SMLS/BWB/2P/8IN	Seamless Board to Board cable	8	10
71842	LAC-C/SMLS/WB/2P/24IN	Seamless Wire to Board cable	24	10

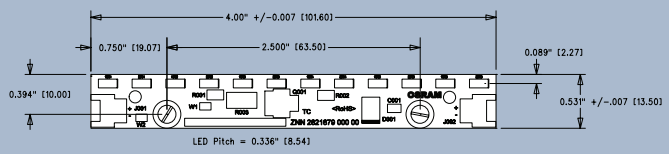
Minimum and Maximum Ratings

Parameter	Values
Operating Temperature at Tc Point	-30 to +85°C (-22 to +185°F)
Storage Temperature Range	-30 to +85°C (-22 to +185°F)
Voltage Range	23-25 Vdc
Reverse Voltage	25 Vdc

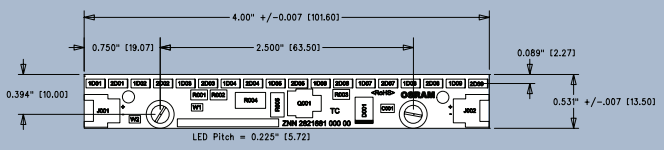
Notes:
1. Exceeding maximum ratings may damage the LED module and pose potential safety hazards.
2. Elevated operating temperatures can be expected to negatively impact the service life in terms of lumen output.
3. Incorrect wiring may damage the LED module.
4. Not intended for use with constant current power supplies.

Assembly Diagram

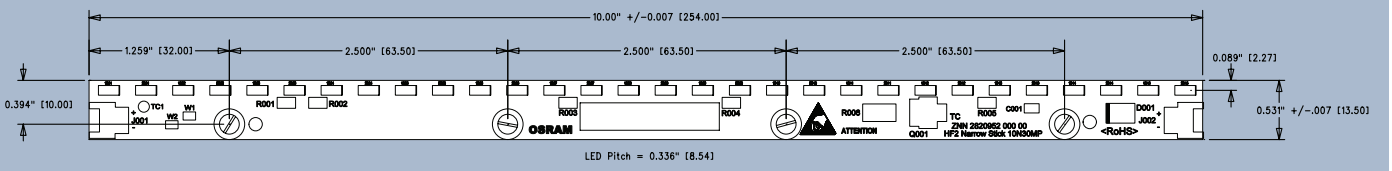
4" – 12 LEDs



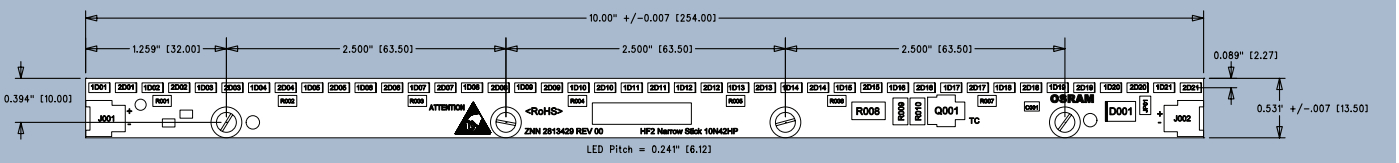
4" – 18 LEDs



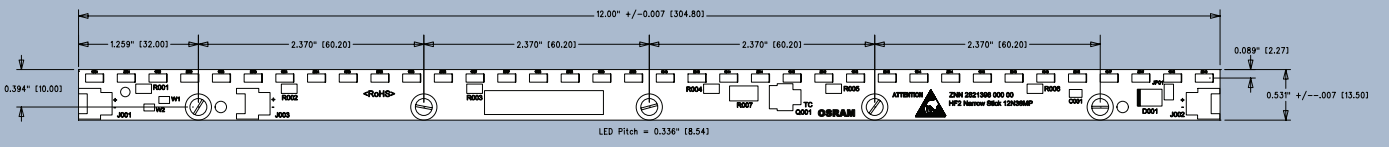
10" – 30 LEDs



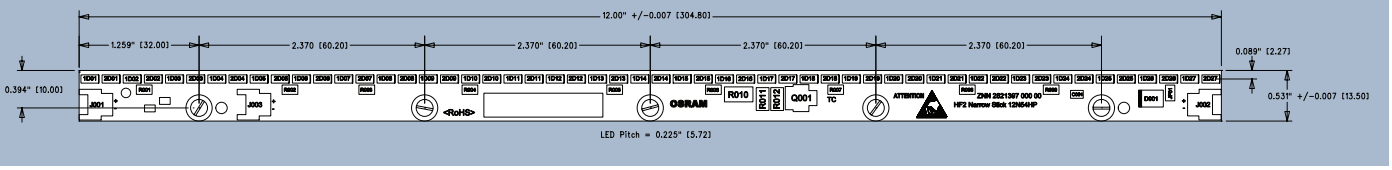
10" – 42 LEDs



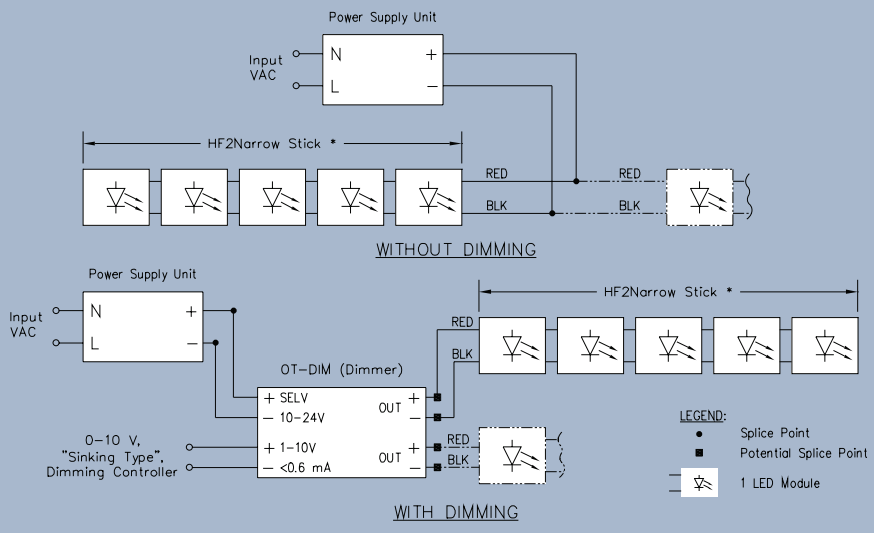
12" – 36 LEDs



12" – 54 LEDs



Wiring Diagram



Notes:

1. Reference the "Power Supply Information" for maximum number of LED modules that can be operated on a single feed. Remaining load may be connected with parallel power feed(s). It is recommended, if at all possible, that the power supply be located near the middle of a run and these parallel feeds fed from here. This method helps reduce voltage drop potential from long power feeds.
2. Reference the "Power Supply Information" for maximum LED load per power supply requirements.

Safety Information

WARNING: ONLY QUALIFIED PERSONNEL SHOULD PERFORM INSTALLATION.

TO AVOID ELECTRICAL SHOCK OR COMPONENT DAMAGE, DISCONNECT POWER BEFORE ATTEMPTING INSTALLATION OF THE POWER SUPPLIES AND/OR MODULES

Failure to install the power supplies and/or LED modules in accordance with the National Electric Code (NEC), all applicable Federal, State and local electric codes as well as the specific Underwriters Laboratories (UL) safety standards for the installation, location and application may cause serious personal injury, death, property damage and/or product malfunction.

1. The LED module itself and all its components shall not be subjected to mechanical stress and assembly must not damage or destroy conducting paths on the circuit board.
2. Observe correct electrical polarity, incorrect polarity may destroy the module. (Depending on the product, incorrect polarity may lead to emission of red or no light.)
3. Electrostatic Discharge (ESD) precautions shall be incorporated when handling or installing the module. (For more information, reference document #LED093, ESD Protection for LED Systems.)
4. Damage by corrosion and improper heat sinking will not be honored as a materials defect claim. It is the user's responsibility to ensure adequate heat sink and protection against corrosive agents such as moisture, condensation and other harmful elements.
5. Modules may be hot to the touch. Use caution when handling.

Assembly Information

1. The product must be mounted on an appropriate heat sink.
2. Module to be installed in **dry locations** only.
3. Mounting holes are provided to secure the product to the heat sink substrate using M3 metric or #4-40 American screws. The mounting surface should be smooth to guarantee optimal heat transfer. The product should not be installed onto curved surfaces.
4. Heat sink compounds may be used to facilitate heat transfer from the module to the heat sink material.
5. Please ensure the power supply is of adequate power to operate the load. See requirements under the section titled Power Supply Ordering Information.

Warranty

OSRAM LED products are covered by our LED Module, OPTOTRONIC® Power Supply or Control warranty.

The HF²Narrow Stick Seamless is covered under warranty as long as the temperature at the Tc point does not exceed 85°C; exceeding this temperature will void all warranties.

For additional information or to download the warranty registration form, refer to the latest version of the warranty available in the Literature section of www.sylvania.com/LED.

Module Warranty: 3 years

System Warranty: 5 years

United States
OSRAM SYLVANIA
100 Endicott Street
Danvers, MA 01923
1-800-LIGHTBULB

Trade
Phone: 800-255-5042
Fax: 800-255-5043

National Accounts
Phone: 800-562-4671
Fax: 800-562-4674

OEM/Special Markets
Phone: 800-762-7191
Fax: 800-762-7192

Retail
Phone: 800-842-7010
Fax: 800-842-7011

SYLVANIA Lighting Services
Phone: 800-323-0572
Fax: 800-537-0784

Display/Optic
Phone: 888-677-2627
Fax: 855-543-1043

Canada
OSRAM SYLVANIA LTD.
2001 Drew Road
Mississauga, ON L5S 1S4
1-800-LIGHTBULB

Trade
Phone: 800-263-2852
Fax: 800-667-6772

OEM/Special Markets/Display/Optic
Phone: 800-265-2852
Fax: 800-667-6772

Retail
Phone: 800-720-2852
Fax: 800-667-6772

SYLVANIA Lighting Services
Phone: 800-663-4268
Fax: 866-239-1278

Mexico
OSRAM MEXICO
Tultitlán/Edo dé Mexico
Phone: 011-52-55-58-99-18-50

ENCELIUM® Products
United States
Phone: 201-508-1570
Fax: 201-508-1589

Canada
Phone: 905-731-7678
Fax: 905-731-1401

www.sylvania.com

/sylvania
/sylvania