



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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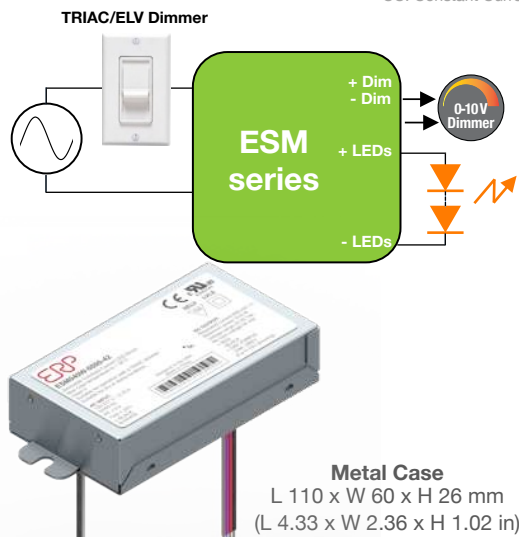
# ESM Series

ESM020	10-20 W
ESM030	21-30 W
ESM040	31-40 W
ESM050	41-50 W
ESM060	51-60 W

## 10 to 60 W Constant Current LED Drivers with Tri-Mode Dimming™ (TRIAC, ELV & 0-10 V)

Input Voltage	Max. Output Power	Output Voltage	Output Current	Efficiency	Max. Case Temperature	THD	Power Factor	Dimming Method	Dimming Range	Startup Time
120 to 277 Vac maximum	60 W	8 to 56 Vdc	280 mA to 1.4 A CC	up to 87% typical	90°C (measured at the hot spot)	< 20%	> 0.9	Forward-Phase, Reverse-Phase & 0 - 10V	1 - 100% (% of Iout)	400 ms

CC: Constant Current



**Metal Case**  
L 110 x W 60 x H 26 mm  
(L 4.33 x W 2.36 x H 1.02 in)



ERP Part Number	Nominal Input Voltage (Vac)	Iout (mA)	Max Output Power (W)	Output Voltage Range (Vdc)	
				Min	Max
<b>ESM020W: 12 to 20 W</b>					
ESM020W-0280-42	120 to 277	280	11.8	24	42
ESM020W-0350-42	120 to 277	350	14.7	24	42
ESM020W-0350-42-Z1 <sup>(5)</sup>	120 to 277	350	14.7	24	42
ESM020W-0400-42	120 to 277	400	16.8	24	42
ESM020W-0440-25	120 to 277	440	11.0	19	25
ESM020W-0440-25-SS-F1B <sup>[1]</sup>	120 to 277	440	11.0	19	25
ESM020W-0440-34-SS-F1B <sup>[2]</sup>	120 to 277	440	15.0	27	34
ESM020W-0440-34	120 to 277	440	15.0	19	34
ESM020W-1000-14	120 to 277	1000	14.0	8	14
<b>ESM030W: 21 to 30 W</b>					
ESM030W-0500-42	120 to 277	500	21.0	24	42
ESM030W-0550-42	120 to 277	550	23.1	24	42
ESM030W-0700-32	120 to 277	700	22.4	21	32
ESM030W-0700-42	120 to 277	700	29.4	24	42
ESM030W-0700-42-Z1 <sup>(5)</sup>	120 to 277	700	29.4	24	42
ESM030W-0900-26	120 to 277	900	23.4	19	26
ESM030W-0940-26-SS-F1B <sup>[3]</sup>	120 to 277	940	24.4	20.5	26
ESM030W-1750-14	120 to 277	1750	24.5	8	14
<b>ESM040W: 31 to 40 W</b>					
ESM040W-0700-56	120 to 277	700	39.2	40	56
ESM040W-0800-42	120 to 277	800	33.6	24	42
ESM040W-0850-42	120 to 277	850	35.7	24	42
ESM040W-0900-42	120 to 277	900	37.8	24	42
ESM040W-0940-33-SS-F1B <sup>[4]</sup>	120 to 277	940	31.0	28	33
ESM040W-0940-43	120 to 277	940	40.4	32	43
<b>ESM050W: 41 to 50 W</b>					
ESM050W-1050-42	120 to 277	1050	44.1	24	42
ESM050W-1050-42-Z1 <sup>(5)</sup>	120 to 277	1050	44.1	24	42
ESM050W-1200-42	120 to 277	1200	50.4	24	42
ESM050W-1400-34	120 to 277	1400	47.6	23	34
<b>ESM060W: 51 to 60 W</b>					
ESM060W-1400-42	120 to 277	1400	58.8	24	42

**Notes:**

- 1) The ESM020W-0440-25-SS-F1B is specifically intended to drive the Cree LMH2 850 sunset module and exhibits a customized 0-10V dimming transfer function. It will not work with any other LED or LED string.
- 2) The ESM020W-0440-34-SS-F1B is specifically intended to drive the Cree LMH2 1250 sunset module and exhibits a customized 0-10V dimming transfer function. It will not work with any other LED or LED string.
- 3) The ESM030W-0940-26-SS-F1B is specifically intended to drive the Cree LMH2 2000 sunset module and exhibits a customized 0-10V dimming transfer function. It will not work with any other LED or LED string.
- 4) The ESM040W-0940-33-SS-F1B is specifically intended to drive the Cree LMH2 3000 sunset module and exhibits a customized 0-10V dimming transfer function. It will not work with any other LED or LED string.
- 5) Models with the "Z1" suffix exhibit a non-linear 0-10V dimming profile: (10V to 9.1V=100%, 1V to 0.8V=1%, <0.8V dim-to-off).
- 6) For additional options of output current and output voltage, contact your sales representative or send an email to: [SaveEnergy@erp-power.com](mailto:SaveEnergy@erp-power.com).

### FEATURES

- Compatible with TRIAC (forward-phase or leading-edge), ELV (reverse-phase or trailing-edge) and 0-10 V dimmers
- TRIAC and ELV dimming only at 120 Vac
- 90°C maximum case hot spot temperature
- Class 2 power supply
- Lifetime: 50,000 hours at 70°C case hot spot temperature (some models have higher lifetime. Check lifetime curves in page 6)
- IP20-rated case with silicone-based potting
- Two 0-10V dimming profiles are available:
  - Linear 0-10 V dimming: 10V=100%, 1V=10%, 0.1V=1%.
  - Non-linear 0-10V dimming: 10V to 8.1V=100%, 1V to 0.8V=1%, <0.8V dim-to-off.
- Protections: output open load, over-current and short-circuit (hiccup), and over-temperature with auto recovery
- Conducted and radiated EMI: Compliant with FCC CFR Title 47 Part 15 Class B (120 Vac) and Class A (277 Vac)
- Complies with ENERGY STAR®, DLC (DesignLight Consortium®) and CA Title 24 technical requirements
- Worldwide safety approvals

### APPLICATIONS

- Indoor & outdoor • Recessed lighting (downlights)
- Commercial & residential lighting • Architecture Lighting
- Office Lighting

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