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## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China









### STEVAL-ILL019V1

# 32 W offline RGGB LED driver with individual LED channel brightness regulation

Data brief

### **Features**

■ Line voltage range: 88 to 265 VAC

■ 4-channel LED driver

Constant LED current: 350 mALoad: 5 to 13 LEDs per channel

■ Rated output power: 32 W (wide voltage range)

■ Rated output power: 42 W (EU voltage range)

Isolated SMPS

■ Individual RGGB brightness regulation

■ EN55015 and EN61000-3-2 compliant

■ PCB: double-side, 145 x 75 x 27 mm

■ RoHS compliant

### **Description**

The STEVAL-ILL019V1 demonstration board implements an isolated high-PF flyback converter based on the L6562A transition-mode PFC controller, capable of supplying 4 constant-current outputs for 4 different RGGB LED modules.

Each module can contain 5 to 13 LEDs, with each current channel set to 350 mA.

It is possible to choose between automatic color change mode or manual color adjustment mode (in the latter case some external components are required).



STEVAL-ILL019V1

Schematic diagrams STEVAL-ILL019V1

# Schematic diagrams

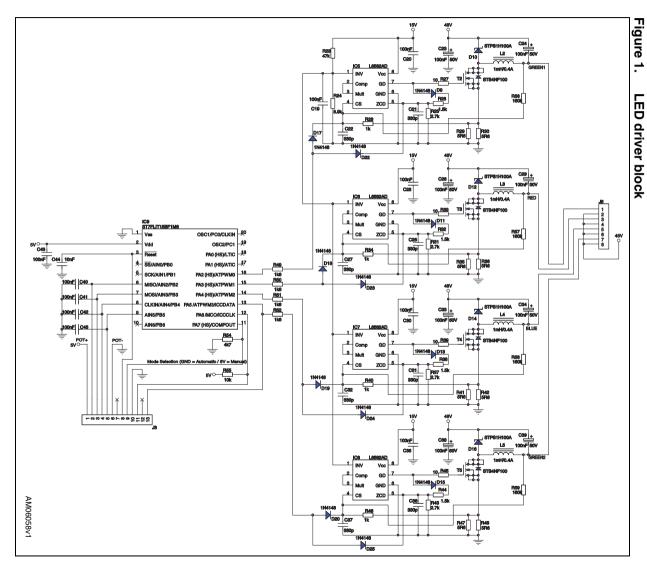




Figure 2.

Power supply block

D1 P6KE300A R8 220k D2 STTHIR08U DRAIN R1 1M5 R9 220k IC4 L78L05ACDT IC3 OUT, 1N4148 D3 100nF C7 + C8 47uF 35V D5 + C11 + 47uF 12 SEC15V- 35V Vin Vout R13 AUX+ 8 <u>C13</u> <u>C14</u> 등원용정 C12 J1 DB1 100nF 100nF 100nF 150nF/X2 🗡 C3\_\_\_ R2 [ 470nF/520V C5 R5 L6562AD R19 4k7 T1 BZV55C15 R STP7NK80ZFP D8 B250C1000SMD R10 10 R17 2x100mH/0.45A 220nF GND C17 + 4.7uF 63V R22 39k cs ZCD 2.2nF TL431AID 2.2uF/25V 2.2k C4 22k R3 1N4148 2.2k R7 PC817B TR2 1\_TRAFO\_13SEC48V+ || | | | | | 12 11 SEC48V-DRAIN 3 Hole\_3mm



Revision history STEVAL-ILL019V1

# 2 Revision history

Table 1. Document revision history

Date	Revision	Changes
19-Jan-2010	1	Initial release.

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