The ability to effectively dim Solid State Lighting (SSL) is a technology challenge that has only recently been conquered. The TRIAC dimmer circuit with Power Factor Correction (PFC) is an example of modern technology making effective use of traditional dimming schemes. Central’s comprehensive portfolio facilitates both energy efficiency improvements and component size reductions for today’s most demanding dimmable lighting solutions.

For more information visit: www.centralsemi.com/product/leddimmer

Off-Line Driver Topology with TRIAC Dimming and PFC

Input Signal Conditioning
- Bridge Rectifiers (Full Wave)
  - CBRHD-04: 0.8A, 400V (HD DIP)
  - CBR1-D040S: 1.0A, 400V (SMDIP)
  - CBR2-D040S: 2.0A, 400V (SMDIP)
- Bi-Directional Transient Voltage Suppressors
  - 1SMB170CA: 600W, 170V (SMB)
  - 1SMC170CA: 1.5kW, 170V (SMC)
  - 3SMC170CA: 3.0kW, 170V (SMC)

For more information visit: www.centralsemi.com/apps/is7

TRIAC Dimmer
- TRIACs
  - CQ223-4M: 4.0A, 600V (SOT-223)
  - CQD-4M: 4.0A, 600V (DPAK)
  - CQDD-8M: 8.0A, 600V (D2PAK)

For more information visit: www.centralsemi.com/apps/td7

Power Factor Correction (PFC)
- Ultra Fast Rectifiers
  - CMMR1U-06: 1.0A, 600V, 75ns (SOD-123F)
  - CMR1U-06M: 1.0A, 600V, 75ns (SMA)
  - CMR3U-06M: 3.0A, 600V, 100ns (SMB)
  - CMR3S-06: 3.0A, 600V, 35ns (SMC)
  - CMR5U-06: 5.0A, 600V, 100ns (SMC)
  - CUDD8-08: 8.0A, 800V, 50ns (D2PAK)

For more information visit: www.centralsemi.com/apps/pfc7

Use QR reader for direct link to application web page.
LED Driver with Dimmer

Switching / Driver

- Bipolar Power Transistors
  - CZT7090L: 3.0A, 40V Low VCE(SAT) PNP (SOT-223)
  - CZT3090LE: 3.0A, 50V Low VCE(SAT) NPN (SOT-223)
  - CZT5338: 5.0A, 100V NPN (SOT-223)
  - CTTLT953-M833: 5.0A, 100V PNP (TLM833)
  - CZT853: 6.0A, 100V NPN (SOT-223)

- Zener Diodes
  - CMOZ3V3 thru CMOZ15V: 350mW, 3.3V -15V (SOD-523)

Feedback

- Ultra Low Leakage Diodes
  - CMOD6001: 250mA, 100V (SOD-523)
  - CMDD6001: 250mA, 100V (SOD-323)

- Zener Diodes
  - CMOZ3V3 thru CMOZ15V: 350mW, 3.3V -15V (SOD-523)

For more information visit: www.centralsemi.com/apps/sd7

Output Rectification

- Super Fast and Ultra Fast Rectifiers
  - CMMR1U-06: 1.0A, 600V, 75ns (SOD-123F)
  - CMR1U-06M: 1.0A, 600V, 75ns (SMA)
  - CMR3U-06M: 3.0A, 600V, 100ns (SMB)
  - CMR3S-06: 3.0A, 600V, 35ns (SMB)
  - CMR5U-06: 5.0A, 600V, 100ns (SMC)

- Schottky Rectifiers
  - CMLSH1-40: 1.0A, 40V (SOT-563)
  - CMMSH1-40L: 1.0A, 40V Low Vf (SOD-123F)
  - CMSSH2-40L: 2.0A, 40V Low Vf (SMB)
  - CMSSH3-40: 3.0A, 40V (SMC)
  - CTTLSH3-30M833: 3.0A, 30V (TLM833)
  - CMSSH5-40: 5.0A, 40V (SMC)
  - CTTLSH5-40M833: 5.0A, 40V (TLM833)

For more information visit: www.centralsemi.com/apps/or7

For more information visit the Application Resources section of Central's website at: www.centralsemi.com/product/applications

Samples

To order samples of these devices visit: http://web.centralsemi.com/search/sample.php

Literature

- New SMD SELECTION GUIDE

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For further information contact:
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PB LED Dimmer Driver (R0)