

ADVANCED TECHNOLOGIES FROM ISRO

Interest Exploration Note

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A Device for Compensating the effect of Temperature Variation on the Brightness of Light Emitting Diodes (LEDs).

Indian Space Research Organization (ISRO) has developed a device for compensating the effect of temperature variation on the brightness of LEDs, which will find wide commercial and special applications. It is required to achieve temperature invariant brightness of LEDs for different instruments and automobile applications. However, brightness of the LEDs changes exponentially with the change of operating temperature of the diodes. The driver circuit will provide temperature compensated voltage / current to the LEDs to compensate the brightness changes with temperature.

SALIENT FEATURES

- The LED driver circuit will provide bias to the LEDs to provide temperature compensated brightness without using any temperature sensors.
- No temperature sensor is required, since properties of the diodes themselves are used to achieve the temperature compensation performance.
- Temperature controlled bias voltage / current generated according to the junction temperature of the LEDs, any temperature gradient will not affect the temperature compensation.
- Temperature changes induced by power dissipated within the diodes are also compensated.

- No trial and error method is involved to optimize the circuit performance.

APPLICATION(S)

- Camera calibration
- Colour printer application
- Applications in traffic light, signal light etc.
- LED displays in different instruments

TECHNOLOGY TRANSFER FROM ISRO

ISRO is willing to offer the know-how of this technology to entrepreneurs / industries in India. Capable manufacturing industries in acquiring this know-how may write with details of their present activities, requirements and plans for implementation, infrastructure and technical expertise available with them, their own market assessment, if any, and plans for diversification to the address given below. Alternatively, you can also fill in the response form provided in this website.

For further details, please contact:

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