

Innovative LED Dimming Control

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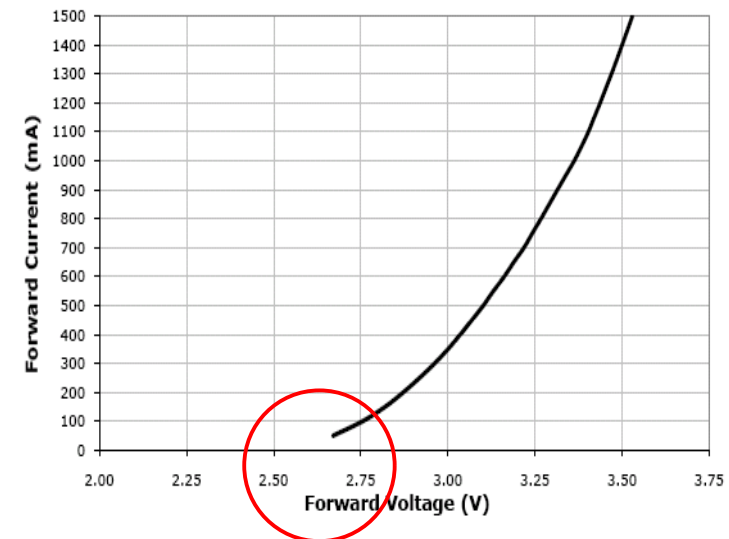
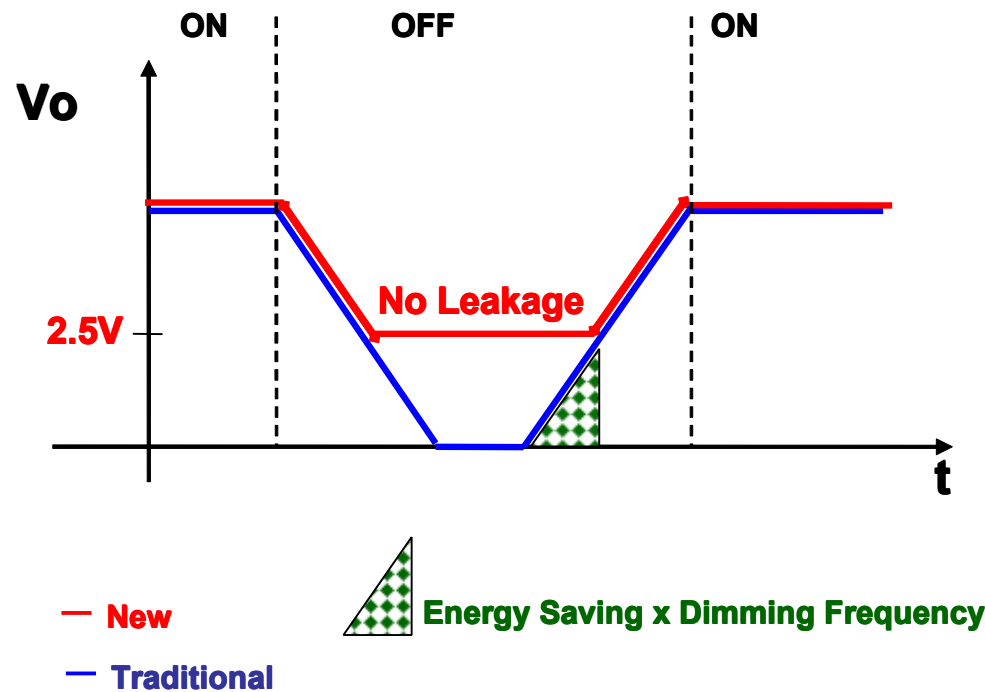
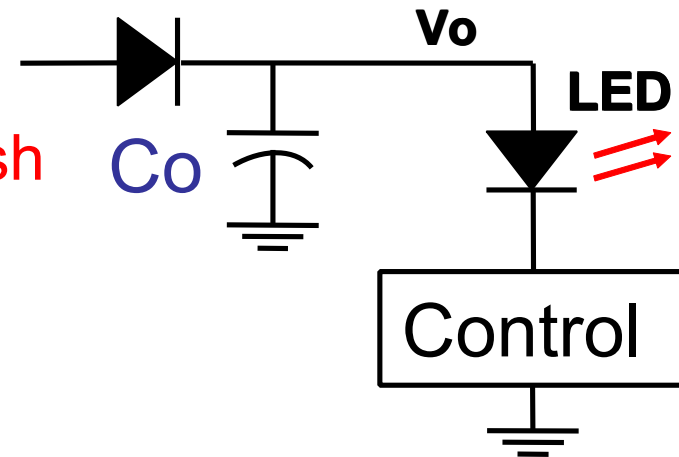
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Agenda

- **OFF-state of LED Dimming**
- **Linear Dimming**
 - **Brightness**
 - **Color**
- **Auto Mode Dimming**
 - **State Switch**

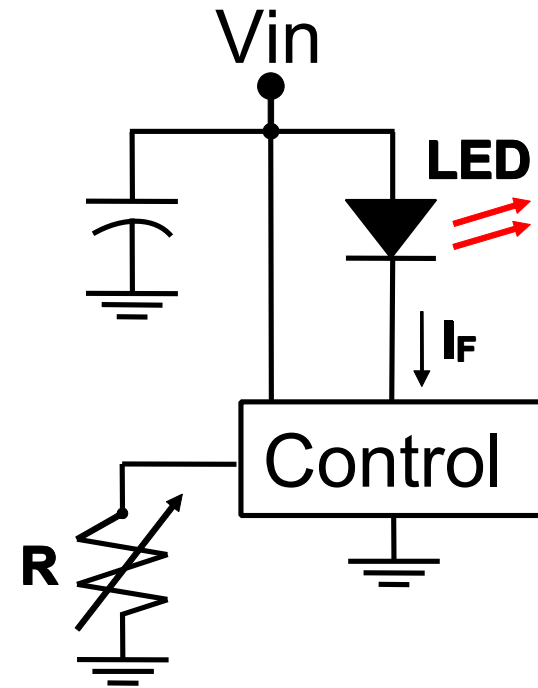
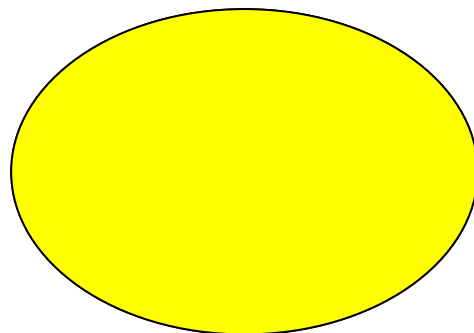
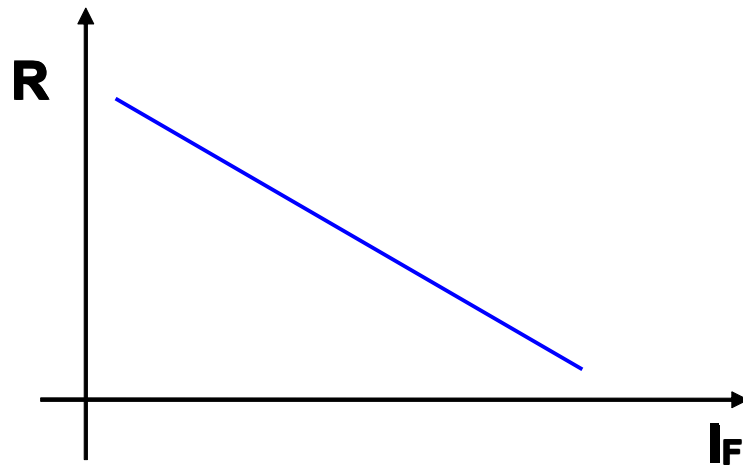
OFF-state of LED Dimming – Boost Type

- I_F is very small @ $V_F=2.5V$
- Save Energy @ C_o , Smaller Inrush



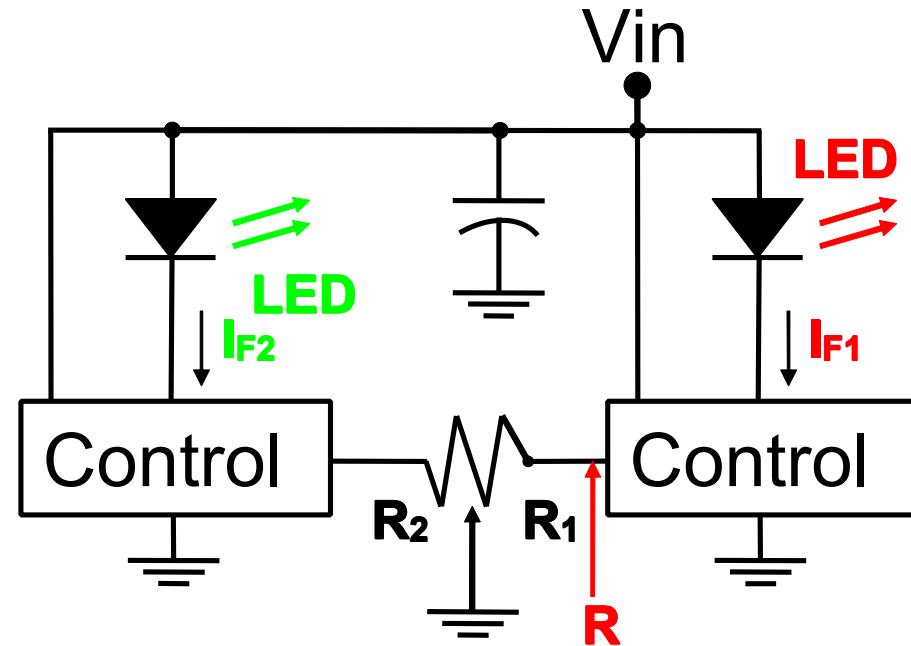
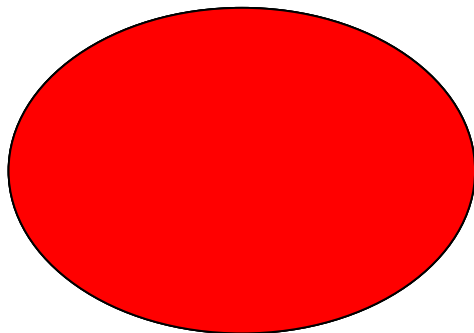
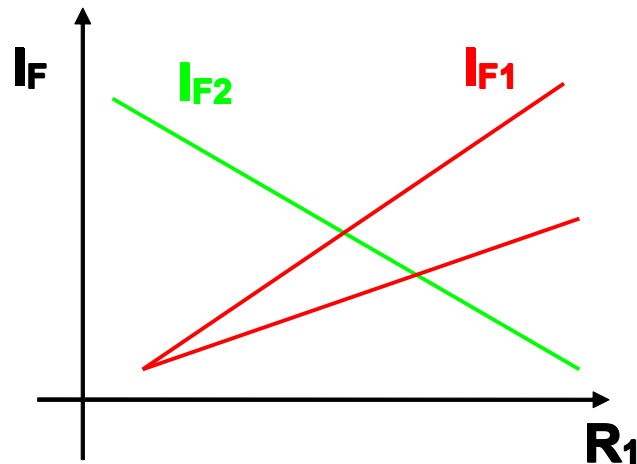
Linear Dimming - Brightness

- I_F vs Resistance



Linear Dimming – Color

• I_F vs Resistance



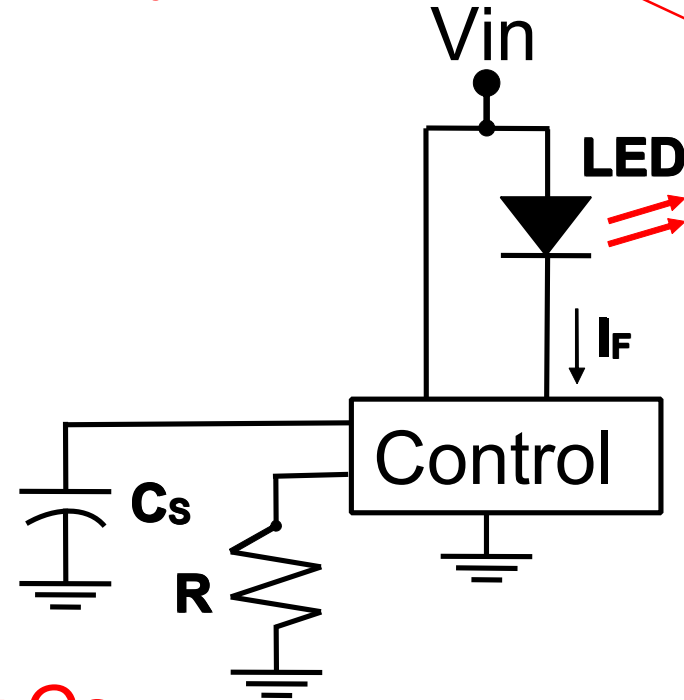
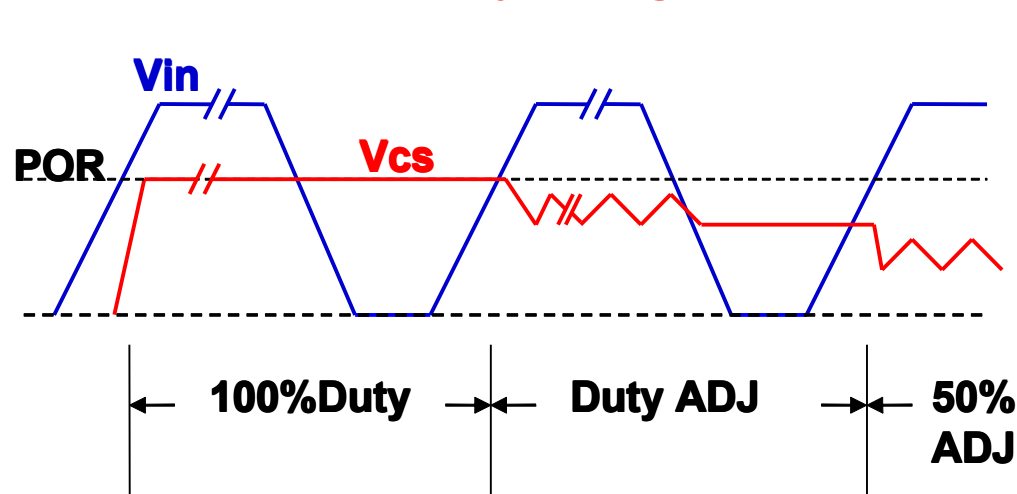
$R_1 + R_2 = R$, R is constant

Add R to change the slope

Auto Mode Dimming - State Switch

Patent Pending

- Fulfill state-cycling function with only one cap



- Duty setting by external R
- **w/o uC, w/o TRIAC**
Dimming Frequency setting by Cs
- **Cycling State**
Control PWM IC, Linear IC, AC/DC,...

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thank you