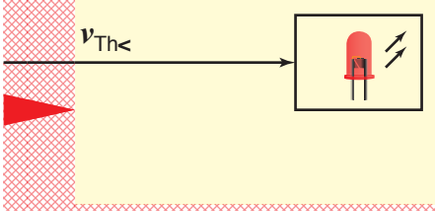
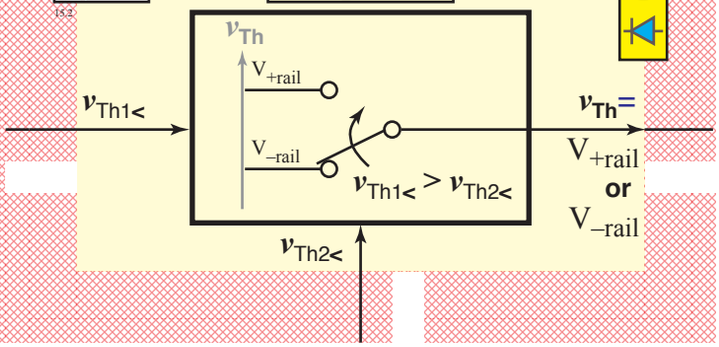
LED: Red

3



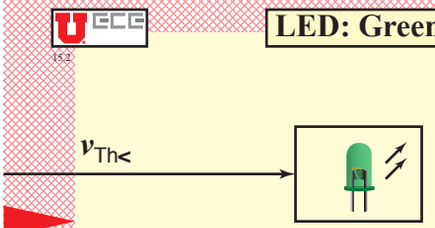
Comparator

1



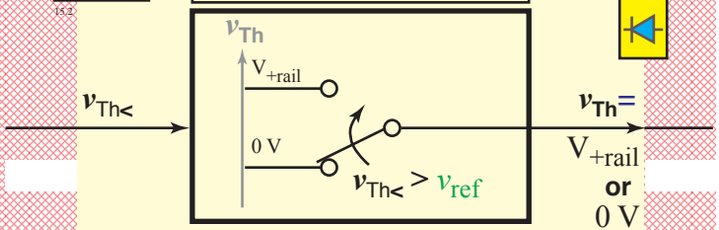
LED: Green

4



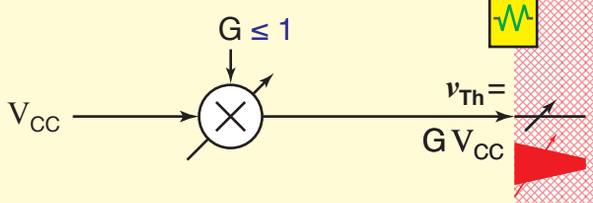
Comparator with V-Ref

2



Voltage Reference

9



Op-Amp Level-Shifter

9

$$\Delta v_{Th<} := v_{Th<Hi} - v_{Th<Low}$$

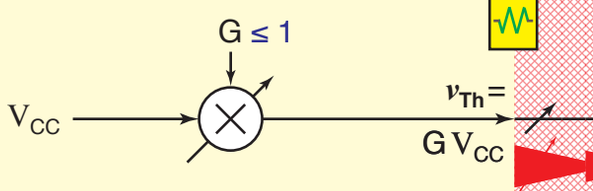
$$\Delta v_{Th} := v_{ThHi} - v_{ThLow}$$

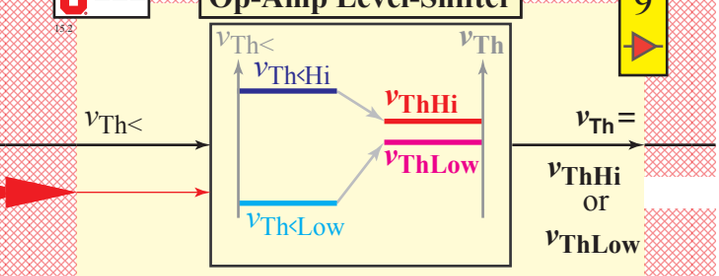
$$\overline{v_{Th<}} := \frac{v_{Th<Hi} + v_{Th<Low}}{2}$$

$$\overline{v_{Th}} := \frac{v_{ThHi} + v_{ThLow}}{2}$$

Voltage Reference

10



Op-Amp Level-Shifter

9