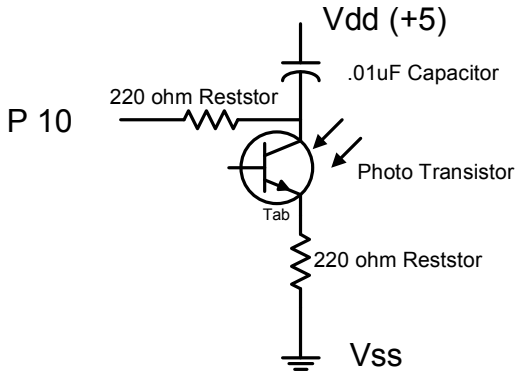

Note:
Output is inverse of light input.

BPW77N is a very high sensitive silicon NPN epitaxial planar phototransistor. The Base lead may be used to adjust the sensitivity.

Quantity	Part
1	Photo Transistor
	Vishay #BPW77NA
	Jameco #12202211
2	220 ohm resistor
1	.01 uF capacitor

REVISIONS		
		VISIO

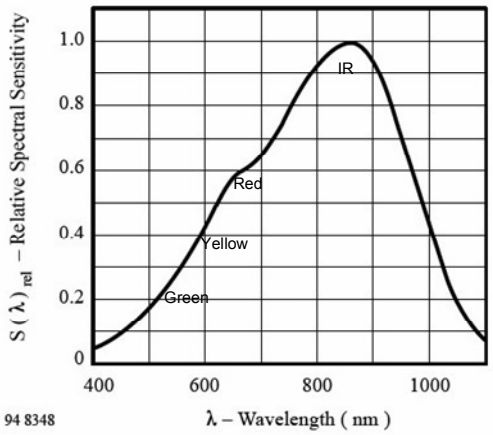

Figure 8. Relative Spectral Sensitivity vs. Wavelength

A red led/laser will be about 60% on the relative sensitivity chart.

```
' -----[ Title ]-----------------------------------------------
' Photo Transistor RC Time Display with Reading Corrections
' Displays the R/C discharge      3-20-2010
' {$STAMP BS2}
' {$PBASIC 2.5}
' -----[ I/O Definitions ]-------------------------------------
PhotoCircuit   CON     10
' -----[ Variables ]-------------------------------------------
PhotoVal       VAR     Word        ' Stores measured RC times
PhotoVala      VAR     Word
' -----[ Initialization ]--------------------------------------
DEBUG CLS                          ' Open, clear Debug window
' -----[ Main Code ]-------------------------------------------
DO
                  ' Measure RC time for  photo Transistor.
  HIGH PhotoCircuit                ' Set to output-high.
  PAUSE 3                          ' Pause for 3 ms
  RCTIME PhotoCircuit,1,PhotoVal       ' Measure R/C time
    IF PhotoVal =0 THEN PhotoVal=10000 ' corrects for dark reading.
    PhotoVala=10000 - PhotoVal         'Resulsts in a 0 to 10000
reading.
  DEBUG HOME, "  Light value =  ", DEC5 PhotoVala, CR
                  'Display
                  'RC time measurements
                  'using DEBUG Terminal.
LOOP
```

Parallax code: Photo Transistor RC Time.bs2
The code listed has been modified.

TITLE	Infra Red Photo Transistor 850 nM center. 620 to 980 nM. For Parallax BS2	
DATE 2-10-2010	SCALE none	Parallax BS2 program provided. Based on Parallax "Applied Sensors" V2.
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