

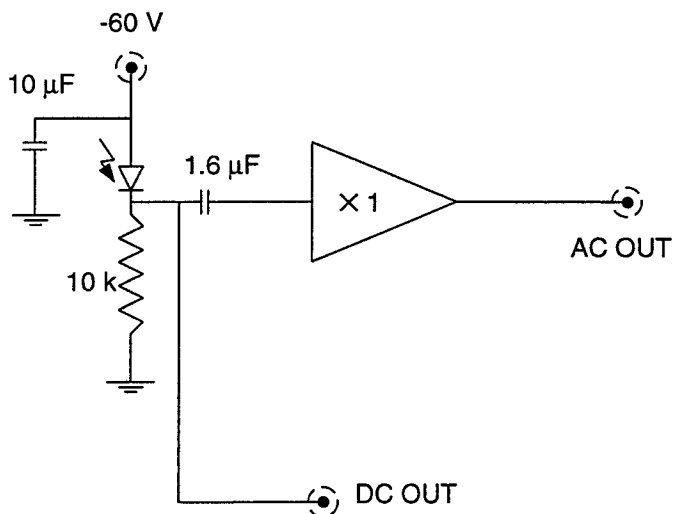
Specifications for Power Sampling Photodetector Intended for use with the NPRO-PSL

A. Abramovici, R. Savage, May 2, 1996

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1. General

- Die-cast aluminum RF-grade box of minimal size, labeled *Power Sampling PD, NPRO-PSL*.
- All circuitry and connectors shall be attached to the lid of the box. Standard 1/2" mounting post attached to the lid of the box via 1/4-20 or 8-32 screw.
- 1/2" dia. hole in the body of the box, centered on photodiode.
- Floating BNC connectors, unless otherwise stated
- Refer to the circuit diagram in Fig. 1.



Photodiode: YAG-200A by EG&G Canada

FIGURE 1. Circuit diagram for Power Sampling Photodetector

2. Inputs

- BNC connector for -60 V bias voltage, center conductor negative, labeled *-60 V IN*.
- Standard 3-pin LEMO connector for ± 12 V input, labeled ± 12 V IN.

3. DC Output

- BNC connector, labeled *DC OUT*.

4. AC Output

- BNC connector, labeled *AC OUT*.
- Impedance, $R_o \leq 10 \Omega$
- Buffered:
Gain=1
3dB bandwidth 10 MHz
- No-light noise levels:
 $N \leq 30 \text{ nV/Hz}^{1/2}$
Line-related spikes $\leq 300 \text{ nV rms}$