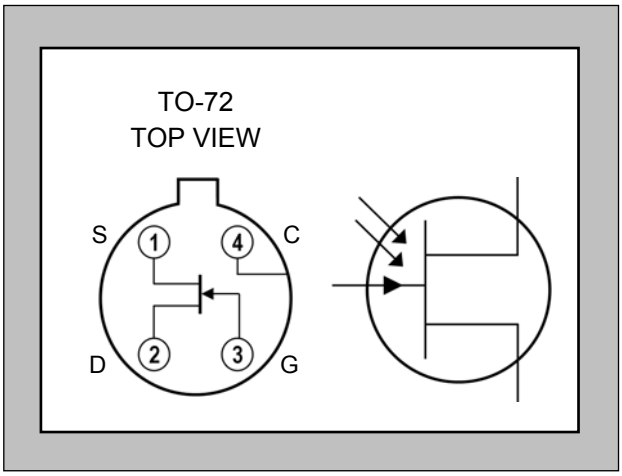
LINEAR SYSTEMS

Twenty-Five Years Of Quality Through Innovation

LS627

PHOTO FET
LIGHT SENSITIVE JFET

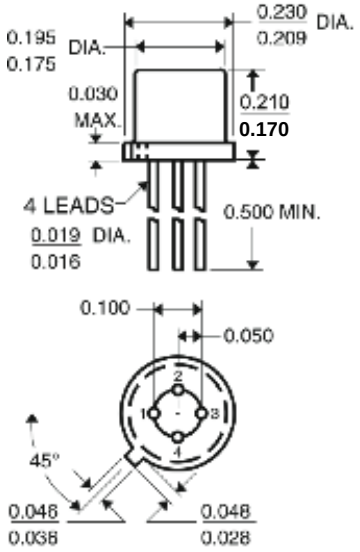
FEATURES	
DIRECT REPLACEMENT FOR CRYSTALONICS FF627	
FLAT GLASS TOP FOR EXTERNAL OPTICS	
ULTRA HIGH SENSITIVITY	
ABSOLUTE MAXIMUM RATINGS[1] @ 25 °C (unless otherwise stated)	
Maximum Temperatures	
Storage Temperature	-65 to +200 °C
Operating Junction Temperature	-55 to +165 °C
Maximum Power Dissipation	
Continuous Power Dissipation, T_A=25°C	400mW
Maximum Currents	
Drain to Source	50mA
Maximum Voltages	
Drain to Gate	15V
Drain to Source	15V
Gate to Source	-10V



ELECTRICAL CHARACTERISTICS @ 25 °C (unless otherwise stated)

SYMBOL	CHARACTERISTIC	MIN	TYP	MAX	UNITS	CONDITIONS
$V_{GS(off)}$	Gate to Source cutoff Voltage (V_{PO})	1.0		5.0	V	V_{DS} = 10V, I_D = 0.1µA
S_G	Gate Sensitivity[2, 7]	6.4		24	µA/mW/cm^2	V_{DS} = 10V, V_{GS} = 0V, λ = 0.9µm
S_D	Drain Sensitivity[3, 7]		500		mA/mW/cm^2	V_{DS} = 10V, V_{GS} = 0V, R_G = 1MΩ
λ_{Ig}	Gate Current (Light)[4, 7]	10		37.5	nA/FC	V_{DS} = 10V, V_{GS} = 0V
λ_{Id}	Drain Current (Light)[4, 7]		800		µA/FC	V_{DS} = 10V, V_{GS} = 0V, R_G = 1MΩ
I_{DSS}	Drain Saturation Current	8.0			mA	V_{DS} = 10V, V_{GS} = 0V
I_{GSS}	Gate Leakage Current (Dark)			30	pA	V_{GS} = -10V, V_{DS} = 0V
g_{fs}	Forward Transconductance (g_m)	8000			µS	V_{DS} = 10V, V_{GS} = 0V, *f* = 1kHz
$R_{DS(on)}$	Drain to Source On Resistance		100		Ω	V_{DS} = 0.1V, V_{GS} = 0V
C_{GS}	Gate to Source Capacitance[7]			35	pF	V_{GS} = -10V, *f* = 140kHz
C_{GD}	Gate to Drain Capacitance[7]			20		V_{GD} = -10V, *f* = 140kHz
t_r	Rise Time[5, 7]		30		ns	V_{DS} = 10V, R_L = R_G =100Ω
t_f	Fall Time[6, 7]		50			

TO-72
Four Lead



Dimensions in inches

NOTES

1. Absolute maximum ratings are limiting values above which serviceability may be impaired.
2. Gate Current per unit Radient Power Density at Lens Surface
3. Drain Current per unit Radient Power Density (λ = 0.9µm).
4. Tungsten Lamp 2800°K Color Temperature.
5. GaAs Diode Source.
6. Directly Proportional to R_G.
7. Not production tested. Guaranteed by design.

Linear Integrated Systems (LIS) is a 25-year-old, third-generation precision semiconductor company providing high-quality discrete components. Expertise brought to LIS is based on processes and products developed at Amelco, Union Carbide, Intersil and Micro Power Systems by company President John H. Hall. Hall, a protégé of Silicon Valley legend Dr. Jean Hoerni, was the director of IC Development at Union Carbide, co-founder and vice president of R&D at Intersil, and founder/president of Micro Power Systems.