

## List of Symbols

<i>Symbol</i>	<i>Description</i>
$\theta$	Angle of incident
A or S	Area
$E_g$	Bandgap energy
$\Phi_B$	Barrier height
k	Boltzmann constant
$V_{bi}$	Build-in potential
$\Delta I$	Change in current
$\Delta R$	Change in resistance
$\Delta V$	Change in voltage
$\Delta E_c$	Conduction band offset
$I_a$ or $I_o$	Current in air
$I_g$	Current in the target gas
$E_c$	Conduction band energy
$\tau_d$	Decay time
$I_d$	Dark Current
$D^*$	Detectivity of photodetector
W	Depletion width
q	Electron charge
G	Electron conduction
$\chi$	Electron affinity
$\mu$	Electron mobility
$q \phi_r$	Energy difference in conduction band and Fermi level
$\nu$	Frequency
$\eta$	Ideality factor
$P_i$	Input power
c	Lattice constant
l	Length
$\Phi_m$	Metal work function
T	Operating temperature
h	Plank constant
$I_p$	Photocurrent
n	Power coefficient
S	Relative response
$R_a$	Resistance in air
$R_g$	Resistance in the target gas
R	Responsivity of photodetector
$A^*$	Richardson constant
$\tau_r$	Rise time
$E_v$	Valance band energy
$\Delta E_v$	Valance band offset
$V_a$	Voltage in air
$V_g$	Voltage in the target gas
$\lambda$	Wavelength
W	Watt

