BASIC CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)						
PARAMETER	**TEST CONDITION**	**SYMBOL**	**MIN.**	**TYP.**	**MAX.**	**UNIT**
Supply voltage		V_{DD}	2.6	3.0	3.6	V
Supply current (1)		I_{DD}	500	580	1000	µA
I^2C signal input (1) Logic high		V_{IH}	1.2	-	-	V
I^2C signal input (1) Logic low		V_{IL}	-	-	0.4	V
Peak sensitivity wavelength		λ_{PC}	-	590	-	nm
		λ_{PR}	-	610	-	nm
		λ_{PG}	-	560	-	nm
		λ_{PB}	-	470	-	nm
		λ_{PIR}	-	825	-	nm
Irradiance responsivity	520 nm LED (1)(2)	C	-	57	-	counts/(µW/cm²)
	850 nm LED (1)(2)	IR	-	25	-	counts/(µW/cm²)
	643 nm LED (1)(2)	R	-	41	-	counts/(µW/cm²)
	520 nm LED (1)(2)	G	-	39	-	counts/(µW/cm²)
	460 nm LED (1)(2)	B	-	34	-	counts/(µW/cm²)
Sensitivity	5000 K WLED (1)(3)	G	-	0.003	-	lx/count
Dark offset (1)(3)		R, G, B, C, IR	0	-	3	counts
Operating temperature range		T_{amb}	-40	-	+85	°C
Shutdown current (1)	Light condition = dark	I_{DD}	0	800	1000	nA

Notes

(2) Test condition: V_{DD} = 3 V, temperature: 25 °C

(3) IT: 100 ms, SENS = (0) = x 1, DG = (0 : 0) = x 1, GAIN = (0 : 0) = x 1

(4) IT: 400 ms, SENS = (0) = x 1, DG = (1 : 0) = x 4, GAIN = (0 : 0) = x 4

I²C BUS TIMING CHARACTERISTICS (T_{amb} = 25 °C, unless otherwise specified)						
PARAMETER	SYMBOL	STANDARD MODE		FAST MODE		UNIT
		MIN.	MAX.	MIN.	MAX.	
Clock frequency	$f_{(I2CCLK)}$	10	100	10	400	kHz
Bus free time between start and stop condition	$t_{(BUF)}$	4.7	-	1.3	-	µs
Hold time after (repeated) start condition; after this period, the first clock is generated	$t_{(HDSTA)}$	4.0	-	0.6	-	µs
Repeated start condition setup time	$t_{(SUSTA)}$	4.7	-	0.6	-	µs
Stop condition setup time	$t_{(SUSTO)}$	4.0	-	0.6	-	µs
Data hold time	$t_{(HDDAT)}$	-	3450	-	900	ns
Data setup time	$t_{(SUDAT)}$	250	-	100	-	ns
I²C clock (SCK) low period	$t_{(LOW)}$	4.7	-	1.3	-	µs
I²C clock (SCK) high period	$t_{(HIGH)}$	4.0	-	0.6	-	µs
Clock / data fall time	t_f	-	300	-	300	ns
Clock / data rise time	t_r	-	1000	-	300	ns

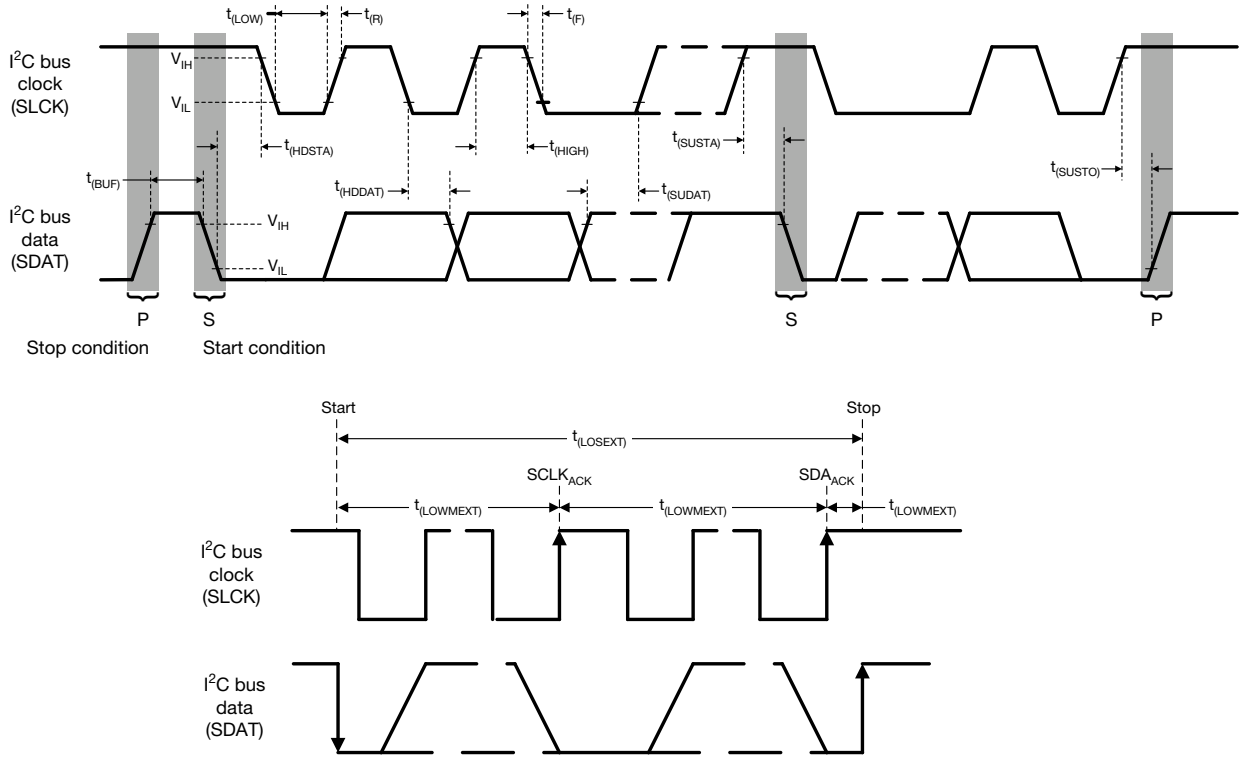

Fig. 1 - I²C Bus Timing Diagram