

§3 Optical Characteristics

STN Type, $T_a=25^\circ\text{C}$

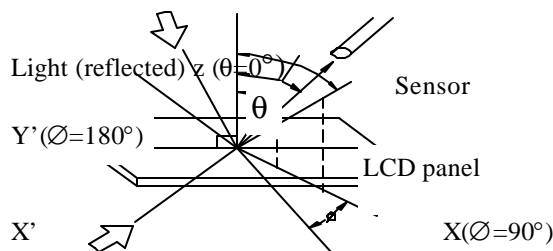
Item	Symbol	Conditions	Min.	Typ.	Max	Note
Viewing angle	$\theta_2-\theta_1$	$C>2.0, \varnothing=0^\circ\text{C}$	60°	-	-	Note 1,2
Contrast Ratio	C	$\theta=5^\circ, \varnothing=0^\circ$	-	5	-	Note 3
Response time(rise)	ton	$\theta=5^\circ, \varnothing=0^\circ$	-	150ms	250ms	Note 4
Response time(fall)	toff	$\theta=5^\circ, \varnothing=0^\circ$	-	200ms	300ms	Note 4

TN Type, $T_a=25^\circ\text{C}$

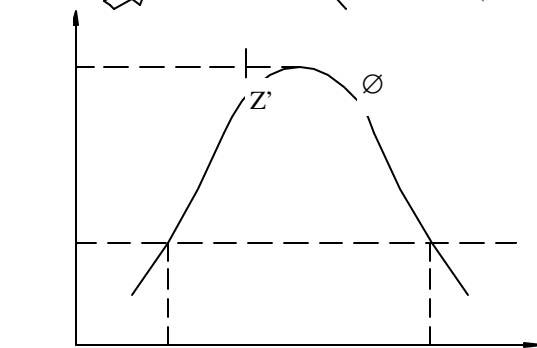
Item	Symbol	Conditions	Min.	Typ.	Max	Note
Viewing angle	$\theta_2-\theta_1$	$C>2.0, \varnothing=0^\circ\text{C}$		40°	-	Note 1,2
Contrast Ratio	C	$\theta=25^\circ, \varnothing=0^\circ$	-	5	-	Note 3
Response time(rise)	ton	$\theta=25^\circ, \varnothing=0^\circ$	-	80ms	120ms	Note 4
Response time(fall)	toff	$\theta=25^\circ, \varnothing=0^\circ$	-	60ms	90ms	Note 4

Note 1: Definition of angles θ and \varnothing and θ_2

Note 2: Definition of viewing angles θ_1



$C_{max.}$
Contrast
2.0



Light (when transmitted) $Y(\varnothing=70^\circ)$
 $(\theta=90^\circ)$

with the
angle θ at

θ_1 θ_2
viewing angle θ (\varnothing fixed)
Remark: Optimum viewing angle

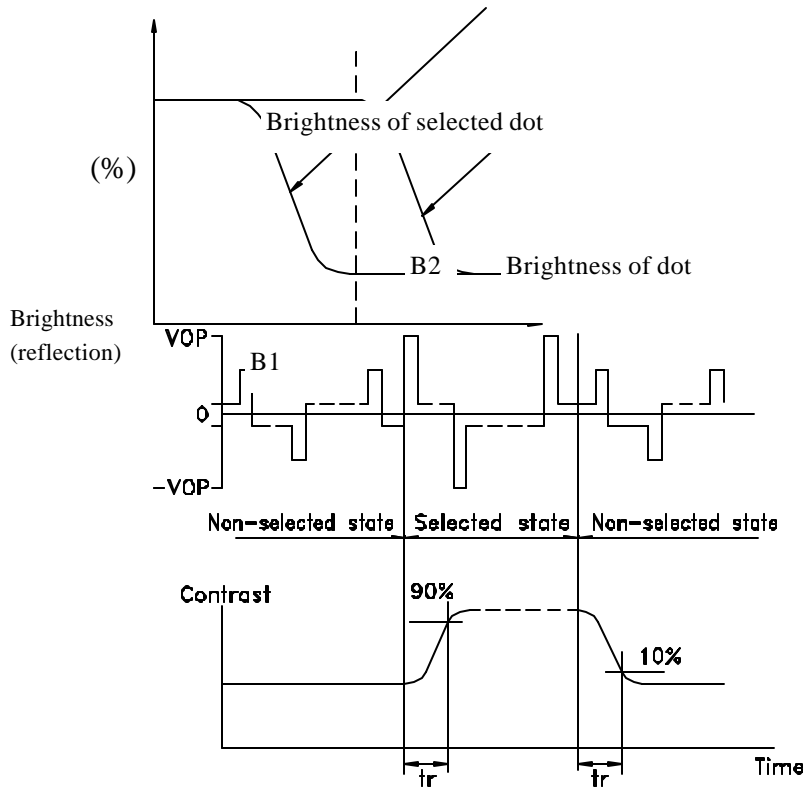
naked eye and viewing

$C_{max.}$

Note 4: Definition of

Note 3: Definition of contrast C
response time

$$C = \frac{\text{Brightness (reflection) of unselected dot (B2)}}{\text{Brightness (reflection) of selected dot (B1)}}$$



0
transmissive LCD
cm²

Operating voltage (v)

Note: Measured with a
panel which is displayed 1

fFRM : Frame frequency

toff : Response time (fall)

Vopr : Operating voltage

ton : Response time (rise)