

PG No. 21 C_6 6 [hexagonal]

Table 1: Representation matrices

Irrep.													
A	$1 :$	$\begin{bmatrix} 1 \end{bmatrix}$	$3^+_{001} :$	$\begin{bmatrix} 1 \end{bmatrix}$	$3^-_{001} :$	$\begin{bmatrix} 1 \end{bmatrix}$	$2_{001} :$	$\begin{bmatrix} 1 \end{bmatrix}$	$6^-_{001} :$	$\begin{bmatrix} 1 \end{bmatrix}$	$6^+_{001} :$	$\begin{bmatrix} 1 \end{bmatrix}$	
B	$1 :$	$\begin{bmatrix} 1 \end{bmatrix}$	$3^+_{001} :$	$\begin{bmatrix} 1 \end{bmatrix}$	$3^-_{001} :$	$\begin{bmatrix} 1 \end{bmatrix}$	$2_{001} :$	$\begin{bmatrix} -1 \end{bmatrix}$	$6^-_{001} :$	$\begin{bmatrix} -1 \end{bmatrix}$	$6^+_{001} :$	$\begin{bmatrix} -1 \end{bmatrix}$	
E_1	$1 :$	$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$	$3^+_{001} :$	$\begin{bmatrix} -\frac{1}{2} & -\frac{\sqrt{3}}{2} \\ \frac{\sqrt{3}}{2} & -\frac{1}{2} \end{bmatrix}$	$3^-_{001} :$	$\begin{bmatrix} -\frac{1}{2} & \frac{\sqrt{3}}{2} \\ -\frac{\sqrt{3}}{2} & -\frac{1}{2} \end{bmatrix}$	$2_{001} :$	$\begin{bmatrix} -1 & 0 \\ 0 & -1 \end{bmatrix}$	$6^-_{001} :$	$\begin{bmatrix} \frac{1}{2} & \frac{\sqrt{3}}{2} \\ -\frac{\sqrt{3}}{2} & \frac{1}{2} \end{bmatrix}$	$6^+_{001} :$	$\begin{bmatrix} \frac{1}{2} & -\frac{\sqrt{3}}{2} \\ \frac{\sqrt{3}}{2} & \frac{1}{2} \end{bmatrix}$	
E_2	$1 :$	$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$	$3^+_{001} :$	$\begin{bmatrix} -\frac{1}{2} & -\frac{\sqrt{3}}{2} \\ \frac{\sqrt{3}}{2} & -\frac{1}{2} \end{bmatrix}$	$3^-_{001} :$	$\begin{bmatrix} -\frac{1}{2} & \frac{\sqrt{3}}{2} \\ -\frac{\sqrt{3}}{2} & -\frac{1}{2} \end{bmatrix}$	$2_{001} :$	$\begin{bmatrix} 1 & 0 \\ 0 & 1 \end{bmatrix}$	$6^-_{001} :$	$\begin{bmatrix} -\frac{1}{2} & -\frac{\sqrt{3}}{2} \\ \frac{\sqrt{3}}{2} & -\frac{1}{2} \end{bmatrix}$	$6^+_{001} :$	$\begin{bmatrix} -\frac{1}{2} & \frac{\sqrt{3}}{2} \\ -\frac{\sqrt{3}}{2} & -\frac{1}{2} \end{bmatrix}$	