SG No. 106 C_{4v}^8 $P4_2bc$ [tetragonal]

* generator : $\{2_{001}|0\}$, $\{4_{001}^+|00\tfrac{1}{2}\}$, $\{m_{010}|\tfrac{1}{2}\tfrac{1}{2}0\}$
* symmetry operation $+[0, 0, 0]$

Table 1: Symmetry operations for 3d polar vector.

No.	tag	matrix (polar)	det
1	$\{1|0\}$	$\begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}$	1
2	$\{2_{001}|0\}$	$\begin{bmatrix} -1 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}$	1
3	$\{4_{001}^+|00\tfrac{1}{2}\}$	$\begin{bmatrix} 0 & -1 & 0 & 0 \\ 1 & 0 & 0 & 0 \\ 0 & 0 & 1 & \tfrac{1}{2} \end{bmatrix}$	1
4	$\{4_{001}^-|00\tfrac{1}{2}\}$	$\begin{bmatrix} 0 & 1 & 0 & 0 \\ -1 & 0 & 0 & 0 \\ 0 & 0 & 1 & \tfrac{1}{2} \end{bmatrix}$	1
5	$\{m_{010}|\tfrac{1}{2}\tfrac{1}{2}0\}$	$\begin{bmatrix} 1 & 0 & 0 & \tfrac{1}{2} \\ 0 & -1 & 0 & \tfrac{1}{2} \\ 0 & 0 & 1 & 0 \end{bmatrix}$	-1
6	$\{m_{100}|\tfrac{1}{2}\tfrac{1}{2}0\}$	$\begin{bmatrix} -1 & 0 & 0 & \tfrac{1}{2} \\ 0 & 1 & 0 & \tfrac{1}{2} \\ 0 & 0 & 1 & 0 \end{bmatrix}$	-1
7	$\{m_{110}|\tfrac{1}{2}\tfrac{1}{2}\tfrac{1}{2}\}$	$\begin{bmatrix} 0 & -1 & 0 & \tfrac{1}{2} \\ -1 & 0 & 0 & \tfrac{1}{2} \\ 0 & 0 & 1 & \tfrac{1}{2} \end{bmatrix}$	-1
8	$\{m_{1-10}|\tfrac{1}{2}\tfrac{1}{2}\tfrac{1}{2}\}$	$\begin{bmatrix} 0 & 1 & 0 & \tfrac{1}{2} \\ 1 & 0 & 0 & \tfrac{1}{2} \\ 0 & 0 & 1 & \tfrac{1}{2} \end{bmatrix}$	-1