

PG No. 33 $D_{2d}(1)$ $\bar{4}2m$ (-4m2 setting) [tetragonal]

* character table

$D_{2d}(1)$	$1(1)$	$2_{001}(1)$	$2_{110}(2)$	$m_{100}(2)$	$-4_{001}^+(2)$
A_1	1	1	1	1	1
A_2	1	1	-1	-1	1
B_1	1	1	1	-1	-1
B_2	1	1	-1	1	-1
E	2	-2	0	0	0

* polar \leftrightarrow axial conversion

A_1 (B_1) B_2 (A_2) E (E) A_2 (B_2) B_1 (A_1)

* symmetric product

	A_1	A_2	B_1	B_2	E
A_1	A_1	A_2	B_1	B_2	E
A_2		A_1	B_2	B_1	E
B_1			A_1	A_2	E
B_2				A_1	E
E					$A_1 + B_1 + B_2$

* anti-symmetric product

	A_1	A_2	B_1	B_2	E
	-	-	-	-	A_2