* character table

C_{2h}	$1(1)$	$2_{010}(1)$	$-1(1)$	$m_{010}(1)$
A_g	1	1	1	1
B_g	1	-1	1	-1
A_u	1	1	-1	-1
B_u	1	-1	-1	1

* polar ↔ axial conversion

$A_g\ (A_u)$ $B_g\ (B_u)$ $A_u\ (A_g)$ $B_u\ (B_g)$

* symmetric product

	A_g	B_g	A_u	B_u
A_g	A_g	B_g	A_u	B_u
B_g		A_g	B_u	A_u
A_u			A_g	B_g
B_u				A_g

* anti-symmetric product

A_g	B_g	A_u	B_u
–	–	–	–