PG No. 44　$C_{3\mathrm{h}}(c)$　$\bar{6}$　[hexagonal]

* character table ($\omega = e^{2\pi i/3}$)

$C_{3\mathrm{h}}(c)$	$1(1)$	$3^+_{001}(1)$	$3^-_{001}(1)$	$\mathrm{m}_{001}(1)$	$-6^+_{001}(1)$	$-6^-_{001}(1)$
A'	1	1	1	1	1	1
A''	1	1	1	-1	-1	-1
$E'^{(a)}$	1	ω^*	ω	1	ω	ω^*
$E'^{(b)}$	1	ω	ω^*	1	ω^*	ω
$E''^{(a)}$	1	ω^*	ω	-1	$-\omega$	$-\omega^*$
$E''^{(b)}$	1	ω	ω^*	-1	$-\omega^*$	$-\omega$

* polar $\leftrightarrow$ axial conversion

A' (A'')　A'' (A')　$E''^{(a)}$ $(E'^{(a)})$　$E''^{(b)}$ $(E'^{(b)})$　$E'^{(a)}$ $(E''^{(a)})$　$E'^{(b)}$ $(E''^{(b)})$

* symmetric product

	A'	A''	$E'^{(a)}$	$E'^{(b)}$	$E''^{(a)}$	$E''^{(b)}$
A'	A'	A''	$E'^{(a)}$	$E'^{(b)}$	$E''^{(a)}$	$E''^{(b)}$
A''		A'	$E''^{(a)}$	$E''^{(b)}$	$E'^{(a)}$	$E'^{(b)}$
$E'^{(a)}$			$E'^{(b)}$	A'	$E''^{(b)}$	A''
$E'^{(b)}$				$E'^{(a)}$	A''	$E''^{(a)}$
$E''^{(a)}$					$E'^{(b)}$	A'
$E''^{(b)}$						$E'^{(a)}$

* anti-symmetric product

A'	A''	$E'^{(a)}$	$E'^{(b)}$	$E''^{(a)}$	$E''^{(b)}$