Table 3.4.2.7. *Group–subgroup symmetry descents* $G \supset F_1$

G: point-group symmetry of parent phase; F_1: point-group symmetry of single-domain state $\mathbf{S}_1$; Γ_η: representation of G; $N_G(F_1)$: normalizer of F_1 in G; $K_G(F_1, g_{1j})$: twinning groups, $g_{1j} \in G$; n: number of principal single-domain states; d_F: number of principal domain states with the same symmetry; n_e: number of ferroelectric single-domain states; n_a: number of ferroelastic single-domain states.

G	F_1	Γ_η	$N_G(F_1)$	$K_G(F_1, g_{1j})$	n	d_F	n_e	n_a
$\bar{\mathbf{1}}$	1	A_u	$\bar{1}$	$\bar{1}^\star$	2	2	2	1
$\mathbf{2}_u$†	1	B	2_u	$2_u^\star$	2	2	2	2
$\boldsymbol{m}_u$†	1	A''	m_u	$m_u^\star$	2	2	2	2
$\mathbf{2}_u/\boldsymbol{m}_u$†	m_u	B_u	$2_u/m_u$	$2_u^\star/m_u$	2	2	2	1
	2_u	A_u	$2_u/m_u$	$2_u/m_u^\star$	2	2	2	1
	$\bar{1}$	B_g	$2_u/m_u$	$2_u^\star/m_u^\star$	2	2	0	2
	1	Reducible	$2_u/m_u$	$m_u^\star$, $2_u^\star$, $\bar{1}^\star$	4	4	4	2
$\mathbf{2}_x\mathbf{2}_y\mathbf{2}_z$	2_z	B_{1g}	$2_x2_y2_z$	$2_x^\star2_y^\star2_z$	2	2	2	2
	2_x	B_{3g}	$2_x2_y2_z$	$2_x2_y^\star2_z^\star$	2	2	2	2
	2_y	B_{2g}	$2_x2_y2_z$	$2_x^\star2_y2_z^\star$	2	2	2	2
	1	Reducible	$2_x2_y2_z$	$2_z^\star$, $2_x^\star$, $2_y^\star$	4	4	4	4
$\boldsymbol{m}_x\boldsymbol{m}_y\mathbf{2}_z$	m_x	B_2	$m_xm_y2_z$	$m_xm_y^\star2_z^\star$	2	2	2	2
	m_y	B_1	$m_xm_y2_z$	$m_x^\star m_y2_z^\star$	2	2	2	2
	2_z	A_2	$m_xm_y2_z$	$m_x^\star m_y^\star2_z$	2	2	1	2
	1	Reducible	$m_xm_y2_z$	$m_x^\star$, $m_y^\star$, $2_z^\star$	4	2	4	4
$\boldsymbol{m}_x\boldsymbol{m}_y\boldsymbol{m}_z$	$m_xm_y2_z$	B_{1u}	$m_xm_ym_z$	$m_xm_ym_z^\star$	2	2	2	1
	$2_xm_ym_z$	B_{3u}	$m_xm_ym_z$	$m_x^\star m_ym_z$	2	2	2	1
	$m_x2_ym_z$	B_{2u}	$m_xm_ym_z$	$m_xm_y^\star m_z$	2	2	2	1
	$2_x2_y2_z$	A_{1u}	$m_xm_ym_z$	$m_x^\star m_y^\star m_z^\star$	2	2	0	1
	$2_z/m_z$	B_{1g}	$m_xm_ym_z$	$m_x^\star m_y^\star m_z$	2	2	0	2
	$2_x/m_x$	B_{3g}	$m_xm_ym_z$	$m_xm_y^\star m_z^\star$	2	2	0	2
	$2_y/m_y$	B_{2g}	$m_xm_ym_z$	$m_x^\star m_ym_z^\star$	2	2	0	2
	m_z	Reducible	$m_xm_ym_z$	$2_x^\star m_y^\star m_z$, $m_x^\star2_y^\star m_z$, $2_z^\star/m_z$	4	4	4	2
	m_x	Reducible	$m_xm_ym_z$	$m_xm_y^\star2_z^\star$, $m_x2_y^\star m_z^\star$, $2_x^\star/m_x$	4	4	4	2
	m_y	Reducible	$m_xm_ym_z$	$m_x^\star m_y2_z^\star$, $2_x^\star m_ym_z^\star$, $2_y^\star/m_y$	4	4	4	2
	2_z	Reducible	$m_xm_ym_z$	$m_x^\star m_y^\star2_z$, $2_x^\star2_y^\star2_z$, $2_z/m_z^\star$	4	4	2	2
	2_x	Reducible	$m_xm_ym_z$	$2_xm_y^\star m_z^\star$, $2_x2_y^\star2_z^\star$, $2_x/m_x^\star$	4	4	2	2
	2_y	Reducible	$m_xm_ym_z$	$m_x^\star2_ym_z^\star$, $2_x^\star2_y2_z^\star$, $2_y/m_y^\star$	4	4	2	2
	$\bar{1}$	Reducible	$m_xm_ym_z$	$2_z^\star/m_z^\star$, $2_x^\star/m_x^\star$, $2_y^\star/m_y^\star$	4	4	0	4
	1	Reducible	$m_xm_ym_z$	$m_z^\star$, $m_x^\star$, $m_y^\star$, $2_z^\star$, $2_x^\star$, $2_y^\star$, $\bar{1}^\star$	8	8	8	4
$\mathbf{4}_z$	2_z	B	4_z	$4_z^\star$	2	2	1	2
	1	${}^1E \oplus^2 E$	4_z	4_z, $2_z^\star$	4	4	4	4
$\bar{\mathbf{4}}_z$	2_z	B	$\bar{4}_z$	$\bar{4}_z^\star$	2	2	2	2
	1	${}^1E \oplus^2 E$	$\bar{4}_z$	$\bar{4}_z$, $2_z^\star$	4	2	4	4
$\mathbf{4}_z/\boldsymbol{m}_z$	$\bar{4}_z$	B_u	$4_z/m_z$	$4_z^\star/m_z^\star$	2	2	0	1
	4_z	A_u	$4_z/m_z$	$4_z/m_z^\star$	2	2	2	1
	$2_z/m_z$	B_g	$4_z/m_z$	$4_z^\star/m_z$	2	2	0	2
	m_z	${}^1E_u \oplus^2 E_u$	$4_z/m_z$	$4_z/m_z$, $2_z^\star/m_z$	4	4	4	2
	2_z	Reducible	$4_z/m_z$	$\bar{4}_z^\star$, $4_z^\star$, $2_z/m_z^\star$	4	4	2	2
	$\bar{1}$	${}^1E_g \oplus^2 E_g$	$4_z/m_z$	$4_z/m_z$, $2_z^\star/m_z^\star$	4	4	0	4
	1	Reducible	$4_z/m_z$	$\bar{4}_z$, 4_z, $m_z^\star$, $2_z^\star$, $\bar{1}^\star$	8	8	8	4
$\mathbf{4}_z\mathbf{2}_x\mathbf{2}_{xy}$	4_z	A_2	$4_z2_x2_{xy}$	$4_z2_x^\star2_{xy}^\star$	2	2	2	1
	$2_{x\bar{y}}2_{xy}2_z$	B_2	$4_z2_x2_{xy}$	$4_z^\star2_x^\star2_{xy}$	2	2	0	2
	$2_x2_y2_z$	B_1	$4_z2_x2_{xy}$	$4_z^\star2_x2_{xy}^\star$	2	2	0	2
	2_{xy} $(2_{x\bar{y}})$	E	$2_{x\bar{y}}2_{xy}2_z$	$4_z2_x2_{xy}$, $2_{x\bar{y}}^\star2_{xy}2_z^\star$	4	2	2	2
	2_z	Reducible	$4_z2_x2_{xy}$	$4_z^\star$, $2_x^\star2_y^\star2_z$, $2_{x\bar{y}}^\star2_{xy}^\star2_z$	4	4	2	2
	2_x (2_y)	E	$2_{x\bar{y}}2_{xy}2_z$	$4_z2_x2_{xy}$, $2_x2_y^\star2_z^\star$	4	2	2	2
	1	E	$4_z2_x2_{xy}$	4_z, $2_z^\star$, $2_x^\star(2)$, $2_{xy}^\star(2)$	8	8	8	8
$\mathbf{4}_z\boldsymbol{m}_x\boldsymbol{m}_{xy}$	4_z	A_2	$4_zm_xm_{xy}$	$4_zm_x^\star m_{xy}^\star$	2	2	1	1
	$m_{x\bar{y}}m_{xy}2_z$	B_2	$4_zm_xm_{xy}$	$4_z^\star m_x^\star m_{xy}$	2	2	1	2
	$m_xm_y2_z$	B_1	$4_zm_xm_{xy}$	$4_z^\star m_xm_{xy}^\star$	2	2	1	2
	m_{xy} $(m_{x\bar{y}})$	E	$m_{x\bar{y}}m_{xy}2_z$	$4_zm_xm_{xy}$, $m_{x\bar{y}}^\star m_{xy}2_z^\star$	4	2	4	4
	m_x (m_y)	E	$m_xm_y2_z$	$4_zm_xm_{xy}$, $m_xm_y^\star2_z^\star$	4	2	4	4
	2_z	Reducible	$4_zm_xm_{xy}$	$4_z^\star$, $m_x^\star m_y^\star2_z$, $m_{x\bar{y}}^\star m_{xy}^\star2_z$	4	4	2	2
	1	E	$4_zm_xm_{xy}$	4_z, $m_x^\star(2)$, $m_{xy}^\star(2)$, $2_z^\star$	8	8	8	8

† $u = x, y, z, xy, yz, zx, x\bar{y}, y\bar{z}, z\bar{x}, x', x'', y', y''$.

Table 3.4.2.7 (*cont.*)

G	F_1	Γ_η	$N_G(F_1)$	$K_G(F_1, g_{1j})$	n	d_F	n_e	n_a
$\bar{4}_z\mathbf{2}_x\boldsymbol{m}_{xy}$	$\bar{4}_z$	A_2	$\bar{4}_z2_xm_{xy}$	$\bar{4}_z2_x^\star m_{xy}^\star$	2	2	0	1
	$m_{x\bar{y}}m_{xy}2_z$	B_2	$\bar{4}_z2_xm_{xy}$	$\bar{4}_z^\star2_x^\star m_{xy}$	2	2	2	2
	$2_x2_y2_z$	B_1	$\bar{4}_z2_xm_{xy}$	$\bar{4}_z^\star2_xm_{xy}^\star$	2	2	0	2
	m_{xy} ($m_{x\bar{y}}$)	E	$m_{x\bar{y}}m_{xy}2_z$	$\bar{4}_z2_xm_{xy}$, $m_{x\bar{y}}^\star m_{xy}2_z^\star$	4	2	4	4
	2_z	Reducible	$\bar{4}_z2_xm_{xy}$	$\bar{4}_z^\star$, $m_{x\bar{y}}^\star m_{xy}^\star2_z$, $2_x^\star2_y^\star2_z$	4	4	2	2
	2_x (2_y)	E	$2_x2_y2_z$	$\bar{4}_z2_xm_{xy}$, $2_x2_y^\star2_z^\star$	4	2	4	4
	1	E	$\bar{4}_z2_xm_{xy}$	$\bar{4}_z$, $m_{xy}^\star(2)$, $2_z^\star$, $2_x^\star(2)$	8	8	8	8
$\bar{4}_zm_x2_{xy}$	$\bar{4}_z$	A_2	$\bar{4}_zm_x2_{xy}$	$\bar{4}_zm_x^\star2_{xy}^\star$	2	2	0	1
	$m_xm_y2_z$	B_2	$\bar{4}_zm_x2_{xy}$	$\bar{4}_z^\star m_x2_{xy}^\star$	2	2	2	2
	$2_{x\bar{y}}2_{xy}2_z$	B_1	$\bar{4}_zm_x2_{xy}$	$\bar{4}_z^\star m_x^\star2_{xy}$	2	2	0	2
	m_x (m_y)	E	$m_xm_y2_z$	$\bar{4}_zm_x2_{xy}$, $m_xm_y^\star2_z^\star$	4	2	4	4
	2_{xy} ($2_{x\bar{y}}$)	E	$2_{x\bar{y}}2_{xy}2_z$	$\bar{4}_zm_x2_{xy}$, $2_{x\bar{y}}^\star2_{xy}2_z^\star$	4	2	4	4
	2_z	Reducible	$\bar{4}_zm_x2_{xy}$	$\bar{4}_z^\star$, $m_x^\star m_y^\star2_z$, $2_{x\bar{y}}^\star2_{xy}^\star2_z$	4	4	2	2
	1	E	$\bar{4}_zm_x2_{xy}$	$\bar{4}_z$, $m_x^\star(2)$, $2_{xy}^\star(2)$, $2_z^\star$	8	8	8	8
$\mathbf{4}_z/\boldsymbol{m}_z\boldsymbol{m}_x\boldsymbol{m}_{xy}$	$\bar{4}_zm_x2_{xy}$	B_{2u}	$4_z/m_zm_xm_{xy}$	$4_z^\star/m_z^\star m_x^\star m_{xy}^\star$	2	2	0	1
	$\bar{4}_z2_xm_{xy}$	B_{1u}	$4_z/m_zm_xm_{xy}$	$4_z^\star/m_z^\star m_x^\star m_{xy}$	2	2	0	1
	$4_zm_xm_{xy}$	A_{2u}	$4_z/m_zm_xm_{xy}$	$4_z^\star/m_z^\star m_xm_{xy}$	2	2	2	1
	$4_z2_x2_{xy}$	A_{1u}	$4_z/m_zm_xm_{xy}$	$4_z^\star/m_z^\star m_x^\star m_{xy}$	2	2	0	1
	$4_z/m_z$	A_{2g}	$4_z/m_zm_xm_{xy}$	$4_z^\star/m_zm_x^\star m_{xy}^\star$	2	2	0	1
	$\bar{4}_z$	Reducible	$4_z/m_zm_xm_{xy}$	$\bar{4}_z2_x^\star m_{xy}^\star$, $\bar{4}_zm_x^\star2_{xy}^\star$, $4_z^\star/m_z^\star$	4	4	0	1
	4_z	Reducible	$4_z/m_zm_xm_{xy}$	$4_zm_x^\star m_{xy}^\star$, $4_z2_x^\star2_{xy}^\star$, $4_z/m_z^\star$	4	4	2	1
	$m_{x\bar{y}}m_{xy}m_z$	B_{2g}	$4_z/m_zm_xm_{xy}$	$4_z^\star/m_zm_x^\star m_{xy}$	2	2	0	2
	$m_xm_ym_z$	B_{1g}	$m_xm_ym_z$	$4_z^\star/m_zm_xm_{xy}^\star$	2	2	0	2
	$2_{x\bar{y}}m_{xy}m_z$ ($m_{x\bar{y}}2_{xy}m_z$)	E_u	$m_{x\bar{y}}m_{xy}m_z$	$4_z/m_zm_xm_{xy}$, $m_{x\bar{y}}^\star m_{xy}m_z$	4	2	4	2
	$2_xm_ym_z$ ($m_x2_ym_z$)	E_u	$m_xm_ym_z$	$4_z/m_zm_xm_{xy}$, $m_x^\star m_ym_z$	4	2	4	2
	$m_{x\bar{y}}m_{xy}2_z$	Reducible	$4_z/m_zm_xm_{xy}$	$\bar{4}_z^\star2_x^\star m_{xy}$, $4_z^\star m_x^\star m_{xy}$, $m_{x\bar{y}}m_{xy}m_z^\star$	4	4	2	2
	$m_xm_y2_z$	Reducible	$4_z/m_zm_xm_{xy}$	$\bar{4}_z^\star m_x2_{xy}^\star$, $4_z^\star m_xm_{xy}^\star$, $m_xm_ym_z^\star$	4	4	2	2
	$2_{x\bar{y}}2_{xy}2_z$	Reducible	$4_z/m_zm_xm_{xy}$	$\bar{4}_z^\star m_x^\star2_{xy}$, $4_z^\star2_x^\star2_{xy}$, $m_{x\bar{y}}^\star m_{xy}^\star m_z^\star$	4	4	0	2
	$2_x2_y2_z$	Reducible	$4_z/m_zm_xm_{xy}$	$\bar{4}_z^\star2_xm_{xy}^\star$, $4_z^\star2_x2_{xy}^\star$, $m_x^\star m_y^\star m_z^\star$	4	4	0	2
	$2_{xy}/m_{xy}$ ($2_{x\bar{y}}/m_{x\bar{y}}$)	E_g	$m_{x\bar{y}}m_{xy}m_z$	$4_z/m_zm_xm_{xy}$, $m_{x\bar{y}}^\star m_{xy}m_z^\star$	4	2	0	4
	$2_z/m_z$	Reducible	$4_z/m_zm_xm_{xy}$	$4_z^\star/m_z$, $m_{x\bar{y}}^\star m_{xy}^\star m_z$, $m_x^\star m_y^\star m_z$	4	4	0	4
	$2_x/m_x$ ($2_y/m_y$)	E_g	$m_xm_ym_z$	$4_z/m_zm_xm_{xy}$, $m_xm_y^\star m_z^\star$	4	2	0	4
	$m_{xy}(m_{x\bar{y}})$	Reducible	$m_{x\bar{y}}m_{xy}m_z$	$\bar{4}_z2_xm_{xy}$, $4_zm_xm_{xy}$, $2_{x\bar{y}}^\star m_{xy}m_z^\star$, $m_{x\bar{y}}^\star m_{xy}2_z^\star$, $2_{xy}^\star/m_{xy}$	8	4	8	4
	m_z	E_u	$4_z/m_zm_xm_{xy}$	$4_z/m_z$, $2_{x\bar{y}}^\star m_{xy}^\star m_z(2)$, $2_x^\star m_y^\star m_z(2)$, $2_z^\star/m_z$	8	8	8	4
	m_x (m_y)	Reducible	$m_xm_ym_z$	$\bar{4}_zm_x2_{xy}$, $4_zm_xm_{xy}$, $m_xm_y^\star2_z^\star$, $m_x2_y^\star m_z^\star$, $2_x^\star/m_x$	8	4	8	4
	2_{xy} ($2_{x\bar{y}}$)	Reducible	$m_{x\bar{y}}m_{xy}m_z$	$\bar{4}_zm_x2_{xy}$, $4_z2_x2_{xy}$, $m_{x\bar{y}}^\star2_{xy}m_z^\star$, $2_{x\bar{y}}^\star2_{xy}2_z^\star$, $2_{xy}^\star/m_{xy}^\star$	8	4	8	4
	2_z	Reducible	$4_z/m_zm_xm_{xy}$	$\bar{4}_z^\star$, $4_z^\star$, $m_x^\star m_y^\star2_z$, $m_{x\bar{y}}^\star m_{xy}^\star2_z$, $2_x^\star2_y^\star2_z$, $2_{x\bar{y}}^\star2_{xy}^\star2_z$, $2_z/m_z^\star$	8	8	2	4
	2_x (2_y)	Reducible	$m_xm_ym_z$	$\bar{4}_z2_xm_{xy}$, $4_z2_x2_{xy}$, $2_xm_y^\star m_z^\star$, $2_x2_y^\star2_z^\star$, $2_x/m_x^\star$	8	4	4	4
	$\bar{1}$	E_g	$4_z/m_zm_xm_{xy}$	$4_z/m_z$, $2_{xy}^\star/m_{xy}^\star(2)$, $2_z^\star/m_z^\star$, $2_x^\star/m_x^\star(2)$	8	8	0	8
	1	Reducible	$4_z/m_zm_xm_{xy}$	$\bar{4}_z$, 4_z, $m_{xy}^\star(2)$, $m_z^\star$, $m_x^\star(2)$, $2_{xy}^\star(2)$, $2_z^\star$, $2_x^\star(2)$, $\bar{1}^\star$	16	16	16	8
$\mathbf{3}_z$	1	E	3_z	3_z	3	3	3	3
$\bar{\mathbf{3}}_z$	3_z	A_u	$\bar{3}_z$	$\bar{3}_z^\star$	2	2	2	1
	$\bar{1}$	E_g	$\bar{3}_z$	$\bar{3}_z$	3	3	0	3
	1	E_u	$\bar{3}_z$	$\bar{3}_z$, 3_z, $\bar{1}^\star$	6	6	6	3
$\mathbf{3}_z\mathbf{2}_x$	3_z	A_2	3_z2_x	$3_z2_x^\star$	2	2	2	1
	2_x ($2_{x'}$, $2_{x''}$)	E	2_x	3_z2_x	3	1	3	3
	1	E	3_z2_x	3_z, $2_x^\star(3)$	6	6	6	6
3_z2_y	3_z	A_2	3_z2_y	$3_z2_y^\star$	2	2	2	1
	2_y ($2_{y'}$, $2_{y''}$)	E	2_y	3_z2_y	3	1	3	3
	1	E	3_z2_y	3_z, $2_y^\star(3)$	6	6	6	6
$\mathbf{3}_z\boldsymbol{m}_x$	3_z	A_2	3_zm_x	$3_zm_x^\star$	2	2	1	1
	m_x ($m_{x'}$, $m_{x''}$)	E	m_x	3_zm_x	3	1	3	3
	1	E	3_zm_x	3_z, $m_x^\star(3)$	6	6	6	6
3_zm_y	3_z	A_2	3_zm_y	$3_zm_y^\star$	2	2	1	1
	m_y ($m_{y'}$, $m_{y''}$)	E	m_y	3_zm_y	3	1	3	3
	1	E	3_zm_y	3_z, $m_y^\star(3)$	6	6	6	6

Table 3.4.2.7 (*cont.*)

G	F_1	Γ_η	$N_G(F_1)$	$K_G(F_1, g_{1j})$	n	d_F	n_e	n_a
$\bar{\mathbf{3}}_z\boldsymbol{m_x}$	$3_z m_x$	A_{2u}	$\bar{3}_z m_x$	$\bar{3}_z^\star m_x$	2	2	2	1
	$3_z 2_x$	A_{1u}	$\bar{3}_z m_x$	$\bar{3}_z^\star m_x^\star$	2	2	0	1
	$\bar{3}_z$	A_{2g}	$\bar{3}_z m_x$	$\bar{3}_z m_x^\star$	2	2	0	1
	3_z	Reducible	$\bar{3}_z m_x$	$3_z m_x^\star$, $3_z 2_x^\star$, $\bar{3}_z^\star$	4	4	2	1
	$2_x/m_x$ ($2_{x'}/m_{x'}$, $2_{x''}/m_{x''}$)	E_g	$2_x/m_x$	$\bar{3}_z m_x$	3	1	0	3
	m_x ($m_{x'}$, $m_{x''}$)	E_u	$2_x/m_x$	$\bar{3}_z m_x$, $3_z m_x$, $2_x^\star/m_x(3)$	6	2	6	3
	2_x ($2_{x'}$, $2_{x''}$)	E_u	$2_x/m_x$	$\bar{3}_z m_x$, $3_z 2_x$, $2_x/m_x^\star(3)$	6	2	6	3
	$\bar{1}$	E_g	$\bar{3}_z m_x$	$\bar{3}_z$, $2_x^\star/m_x^\star(3)$	6	6	0	6
	1	E_u	$\bar{3}_z m_x$	$\bar{3}_z$, 3_z, $m_x^\star(3)$, $2_x^\star(3)$, $\bar{1}^\star$	12	12	12	6
$\bar{3}_z m_y$	$3_z m_y$	A_{2u}	$\bar{3}_z m_y$	$\bar{3}_z^\star m_y$	2	2	2	1
	$3_z 2_y$	A_{1u}	$\bar{3}_z m_y$	$\bar{3}_z^\star m_y^\star$	2	2	0	1
	$\bar{3}_z$	A_{2g}	$\bar{3}_z m_y$	$\bar{3}_z m_y^\star$	2	2	0	1
	3_z	Reducible	$\bar{3}_z m_y$	$3_z m_y^\star$, $3_z 2_y^\star$, $\bar{3}_z^\star$	4	4	0	1
	$2_y/m_y$ ($2_{y'}/m_{y'}$, $2_{y''}/m_{y''}$)	E_g	$2_y/m_y$	$\bar{3}_z m_y$	3	1	2	1
	m_y ($m_{y'}$, $m_{y''}$)	E_u	$2_y/m_y$	$\bar{3}_z m_y$, $3_z m_y$, $2_y^\star/m_y(3)$	6	2	0	3
	2_y ($2_{y'}$, $2_{y''}$)	E_u	$2_y/m_y$	$\bar{3}_z m_y$, $3_z 2_y$, $2_y/m_y^\star(3)$	6	2	6	3
	$\bar{1}$	E_g	$\bar{3}_z m_y$	$\bar{3}_z$, $2_y^\star/m_y^\star(3)$	6	6	0	3
	1	E_u	$\bar{3}_z m_y$	$\bar{3}_z$, 3_z, $m_y^\star(3)$, $2_y^\star(3)$, $\bar{1}^\star$	12	12	12	6
$\mathbf{6}_z$	3_z	B	6_z	$6_z^\star$	2	2	1	1
	2_z	E_2	6_z	6_z	3	3	1	3
	1	E_1	6_z	6_z, 3_z, $2_z^\star$	6	6	6	6
$\bar{\mathbf{6}}_z$	3_z	A''	$\bar{6}_z$	$\bar{6}_z^\star$	2	2	2	1
	m_z	E'	$\bar{6}_z$	$\bar{6}_z$	3	2	3	3
	1	E''	$\bar{6}_z$	$\bar{6}_z$, 3_z, $m_z^\star$	6	6	6	6
$\mathbf{6}_z/\boldsymbol{m_z}$	$\bar{6}_z$	B_u	$6_z/m_z$	$6_z^\star/m_z$	2	2	0	1
	6_z	A_u	$6_z/m_z$	$6_z/m_z^\star$	2	2	2	1
	$\bar{3}_z$	B_g	$6_z/m_z$	$6_z^\star/m_z^\star$	2	2	0	1
	3_z	Reducible	$6_z/m_z$	$\bar{6}_z^\star$, $6_z^\star$, $\bar{3}_z^\star$	4	4	2	1
	$2_z/m_z$	E_{2g}	$6_z/m_z$	$6_z/m_z$	3	3	0	3
	m_z	E_{1u}	$6_z/m_z$	$6_z/m_z$, $\bar{6}_z$, $2_z^\star/m_z$	6	6	6	3
	2_z	E_{2u}	$6_z/m_z$	$6_z/m_z$, 6_z, $2_z/m_z^\star$	6	6	2	3
	$\bar{1}$	E_{1g}	$6_z/m_z$	$6_z/m_z$, $\bar{3}_z$, $2_z^\star/m_z^\star$	6	6	0	6
	1	Reducible	$6_z/m_z$	$\bar{6}_z$, 6_z, $\bar{3}_z$, 3_z, $m_z^\star$, $2_z^\star$, $\bar{1}^\star$	12	12	12	6
$\mathbf{6}_z\mathbf{2}_x\mathbf{2}_y$	6_z	A_2	$6_z 2_x 2_y$	$6_z 2_x^\star 2_y^\star$	2	2	2	1
	$3_z 2_x$	B_1	$6_z 2_x 2_y$	$6_z^\star 2_x 2_y^\star$	2	2	0	1
	$3_z 2_y$	B_2	$6_z 2_x 2_y$	$6_z^\star 2_x^\star 2_y$	2	2	0	1
	3_z	Reducible	$6_z 2_x 2_y$	$6_z^\star$, $3_z 2_x^\star$, $3_z 2_y^\star$	4	4	2	1
	$2_x 2_y 2_z$ ($2_{x'} 2_{y'} 2_z$, $2_{x''} 2_{y''} 2_z$)	E_2	$2_x 2_y 2_z$	$6_z 2_x 2_y$	3	1	0	3
	2_z	E_2	$6_z 2_x 2_y$	6_z, $2_x^\star 2_y^\star 2_z(3)$	6	6	2	6
	2_x ($2_{x'}$, $2_{x''}$)	E_1	$2_x 2_y 2_z$	$6_z 2_x 2_y$, $3_z 2_x$, $2_x 2_y^\star 2_z^\star$	6	2	6	6
	2_y ($2_{y'}$, $2_{y''}$)	E_1	$2_x 2_y 2_z$	$6_z 2_x 2_y$, $3_z 2_y$, $2_x^\star 2_y 2_z^\star$	6	2	6	6
	1	E_1	$6_z 2_x 2_y$	6_z, 3_z, $2_z^\star$, $2_x^\star(3)$, $2_y^\star(3)$	12	12	12	12
$\mathbf{6}_z\boldsymbol{m_x m_y}$	6_z	A_2	$6_z m_x m_y$	$6_z m_x^\star m_y^\star$	2	2	1	1
	$3_z m_x$	B_2	$6_z m_x m_y$	$6_z^\star m_x m_y^\star$	2	2	1	1
	$3_z m_y$	B_1	$6_z m_x m_y$	$6_z^\star m_x^\star m_y$	2	2	1	1
	3_z	Reducible	$6_z m_x m_y$	$6_z^\star$, $3_z m_x^\star$, $3_z m_y^\star$	4	4	1	1
	$m_x m_y 2_z$ ($m_{x'} m_{y'} 2_z$, $m_{x''} m_{y''} 2_z$)	E_2	$m_x m_y 2_z$	$6_z m_x m_y$	3	1	1	3
	m_x ($m_{x'}$, $m_{x''}$)	E_1	$m_x m_y 2_z$	$6_z m_x m_y$, $3_z m_x$, $m_x m_y^\star 2_z^\star$	6	2	6	6
	m_y ($m_{y'}$, $m_{y''}$)	E_1	$m_x m_y 2_z$	$6_z m_x m_y$, $3_z m_y$, $m_x^\star m_y 2_z^\star$	6	2	6	6
	2_z	E_2	$6_z m_x m_y$	6_z, $m_x^\star m_y^\star 2_z(3)$	6	6	1	6
	1	E_1	$6_z m_x m_y$	6_z, 3_z, $2_z^\star$, $m_x^\star(3)$, $m_y^\star(3)$	12	12	12	12
$\bar{\mathbf{6}}_z\boldsymbol{m_x}\mathbf{2}_y$	$\bar{6}_z$	A_2'	$\bar{6}_z m_x 2_y$	$\bar{6}_z m_x^\star 2_y^\star$	2	2	0	1
	$3_z m_x$	A_2''	$\bar{6}_z m_x 2_y$	$\bar{6}_z^\star m_x 2_y^\star$	2	2	2	1
	$3_z 2_y$	A_1'	$\bar{6}_z m_x 2_y$	$\bar{6}_z^\star m_x^\star 2_y$	2	2	0	1
	3_z	Reducible	$\bar{6}_z m_x 2_y$	$\bar{6}_z^\star$, $3_z m_x^\star$, $3_z 2_y^\star$	4	4	2	1
	$m_x 2_y m_z$ ($m_{x'} 2_{y'} m_z$, $m_{x''} 2_{y''} m_z$)	E'	$m_x 2_y m_z$	$\bar{6}_z m_x 2_y$	3	1	3	3
	m_z	E'	$\bar{6}_z m_x 2_y$	$\bar{6}_z$, $m_x^\star 2_y^\star m_z(3)$	6	6	6	6
	m_x ($m_{x'}$, $m_{x''}$)	E''	$m_y 2_y m_z$	$\bar{6}_z m_x 2_y$, $3_z m_x$, $m_x 2_y^\star m_z^\star$	6	2	6	6
	2_y ($2_{y'}$, $2_{y''}$)	E''	$m_x 2_y m_z$	$\bar{6}_z m_x 2_y$, $3_z 2_y$, $m_x^\star 2_y m_z^\star$	6	2	3	6
	1	E''	$\bar{6}_z m_x 2_y$	$\bar{6}_z$, 3_z, $m_z^\star$, $m_x^\star(3)$, $2_y^\star(3)$	12	12	12	12

Table 3.4.2.7 (*cont.*)

G	F_1	Γ_η	$N_G(F_1)$	$K_G(F_1, g_{1j})$	n	d_F	n_e	n_a
$\bar{6}_z 2_x m_y$	$\bar{6}_z$	$A_2{}'$	$\bar{6}_z 2_x m_y$	$\bar{6}_z 2_x^\star m_y^\star$	2	2	0	1
	$3_z m_y$	$A_2{}'$	$\bar{6}_z 2_x m_y$	$\bar{6}_z^\star 2_x^\star m_y$	2	2	2	1
	$3_z 2_x$	$A_1{}''$	$\bar{6}_z 2_x m_y$	$\bar{6}_z^\star 2_x m_y^\star$	2	2	0	1
	3_z	Reducible	$\bar{6}_z 2_x m_y$	$\bar{6}_z^\star$, $3_z m_y^\star$, $3_z 2_x^\star$	4	4	2	1
	$2_x m_y m_z$ ($2_{x'} m_{y'} m_z$, $2_{x''} m_{y''} m_z$)	E'	$m_x 2_y m_z$	$\bar{6}_z 2_x m_y$	3	1	3	3
	m_z	E'	$\bar{6}_z 2_x m_y$	$\bar{6}_z$, $2_x^\star m_y^\star m_z(3)$	6	6	6	6
	m_y ($m_{y'}$, $m_{y''}$)	E''	$m_x 2_y m_z$	$\bar{6}_z 2_x m_y$, $3_z m_y$, $2_x^\star m_y m_z^\star$	6	2	6	6
	2_x ($2_{x'}$, $2_{x''}$)	E''	$m_x 2_y m_z$	$\bar{6}_z 2_x m_y$, $3_z 2_x$, $2_x m_y^\star m_z^\star$	6	2	3	6
	1	E''	$\bar{6}_z 2_x m_y$	$\bar{6}_z$, 3_z, $m_z^\star$, $m_y^\star(3)$, $2_x^\star(3)$	12	12	12	12
$\mathbf{6_z/m_z m_x m_y}$	$\bar{6}_z m_x 2_y$	B_{2u}	$6_z/m_z m_x m_y$	$6_z^\star/m_z m_x m_y^\star$	2	2	0	1
	$\bar{6}_z 2_x m_y$	B_{1u}	$6_z/m_z m_x m_y$	$6_z^\star/m_z m_x^\star m_y$	2	2	0	1
	$6_z m_x m_y$	A_{2u}	$6_z/m_z m_x m_y$	$6_z/m_z^\star m_x m_y$	2	2	2	1
	$6_z 2_x 2_y$	A_{1u}	$6_z/m_z m_x m_y$	$6_z/m_z^\star m_x^\star m_y^\star$	2	2	0	1
	$6_z/m_z$	A_{2g}	$6_z/m_z m_x m_y$	$6_z/m_z m_x^\star m_y^\star$	2	2	0	1
	$\bar{6}_z$	Reducible	$6_z/m_z m_x m_y$	$\bar{6}_z m_x^\star 2_y^\star$, $\bar{6}_z 2_x^\star m_y^\star$, $6_z^\star/m_z$	4	4	0	1
	6_z	Reducible	$6_z/m_z m_x m_y$	$6_z m_x^\star m_y^\star$, $6_z 2_x^\star 2_y^\star$, $6_z/m_z^\star$	4	4	2	1
	$\bar{3}_z m_x$	B_{1g}	$6_z/m_z m_x m_y$	$6_z^\star/m_z^\star m_x m_y^\star$	2	2	0	1
	$\bar{3}_z m_y$	B_{2g}	$6_z/m_z m_x m_y$	$6_z^\star/m_z^\star m_x^\star m_y$	2	2	0	1
	$3_z m_x$	Reducible	$6_z/m_z m_x m_y$	$\bar{6}_z^\star m_x 2_y^\star$, $6_z^\star m_x m_y^\star$, $\bar{3}_z^\star m_x$	4	4	2	1
	$3_z m_y$	Reducible	$6_z/m_z m_x m_y$	$\bar{6}_z^\star 2_x^\star m_y$, $6_z^\star m_x^\star m_y$, $\bar{3}_z^\star m_y$	4	4	2	1
	$3_z 2_x$	Reducible	$6_z/m_z m_x m_y$	$\bar{6}_z^\star 2_x m_y^\star$, $6_z^\star 2_x 2_y^\star$, $\bar{3}_z^\star m_z^\star$	4	4	0	1
	$3_z 2_y$	Reducible	$6_z/m_z m_x m_y$	$\bar{6}_z^\star m_x^\star 2_y$, $6_z^\star 2_x^\star 2_y$, $\bar{3}_z^\star m_y^\star$	4	4	0	1
	$\bar{3}_z$	Reducible	$6_z/m_z m_x m_y$	$6_z^\star/m_z^\star$, $\bar{3}_z m_x^\star$, $\bar{3}_z m_y^\star$	4	4	0	1
	3_z	Reducible	$6_z/m_z m_x m_y$	$\bar{6}_z^\star$, $6_z^\star$, $3_z m_x^\star$, $3_z m_y^\star$, $3_z 2_x^\star$, $3_z 2_y^\star$, $\bar{3}_z^\star$	8	8	2	1
	$m_x m_y m_z$ ($m_{x'} m_{y'} m_z$, $m_{x''} m_{y''} m_z$)	E_{2g}	$m_x m_y m_z$	$6_z/m_z m_x m_y$	3	1	0	3
	$m_x m_y 2_z$ ($m_{x'} m_{y'} 2_z$, $m_{x''} m_{y''} 2_z$)	E_{2u}	$m_x m_y m_z$	$6_z/m_z m_x m_y$, $6_z m_x m_y$, $m_x m_y m_z^\star$	6	2	2	3
	$2_x m_y m_z$ ($2_{x'} m_{y'} m_z$, $2_{x''} m_{y''} m_z$)	E_{1u}	$m_x m_y m_z$	$6_z/m_z m_x m_y$, $\bar{6}_z 2_x m_y$, $m_x^\star m_y m_z$	6	2	6	3
	$m_x 2_y m_z$ ($m_{x'} 2_{y'} m_z$, $m_{x''} 2_{y''} m_z$)	E_{1u}	$m_x m_y m_z$	$6_z/m_z m_x m_y$, $\bar{6}_z m_x 2_y$, $m_x m_y^\star m_z$	6	2	6	3
	$2_x 2_y 2_z$ ($2_{x'} 2_{y'} 2_z$, $2_{x''} 2_{y''} 2_z$)	E_{2u}	$m_x m_y m_z$	$6_z/m_z m_x m_y$, $6_z 2_x 2_y$, $m_x^\star m_y^\star m_z^\star$	6	6	0	3
	$2_z/m_z$	E_{2g}	$6_z/m_z m_x m_y$	$6_z/m_z$, $m_x^\star m_y^\star m_z(3)$	6	6	0	6
	$2_x/m_x$ ($2_{x'}/m_{x'}$, $2_{x''}/m_{x''}$)	E_{1g}	$m_x m_y m_z$	$6_z/m_z m_x m_y$, $\bar{3}_z m_x$, $m_x m_y^\star m_z^\star$	6	2	0	6
	$2_y/m_y$ ($2_{y'}/m_{y'}$, $2_{y''}/m_{y''}$)	E_{1g}	$m_x m_y m_z$	$6_z/m_z m_x m_y$, $\bar{3} m_y$, $m_x^\star m_y m_z^\star$	6	2	0	6
	m_z	E_{1u}	$6_z/m_z m_x m_y$	$6_z/m_z$, $\bar{6}_z$, $2_x^\star m_y^\star m_z$, $m_x^\star 2_y^\star m_z$, $2_z^\star/m_z$	12	12	12	6
	m_x ($m_{x'}$, $m_{x''}$)	Reducible	$m_x m_y m_z$	$\bar{6}_z m_x 2_y$, $6_z m_x m_y$, $\bar{3}_z m_x$, $3_z m_x$, $m_x m_y^\star 2_z^\star$, $m_x 2_y^\star m_z^\star$, $2_x^\star/m_x$	12	4	12	6
	m_y ($m_{y'}$, $m_{y''}$)	Reducible	$m_x m_y m_z$	$\bar{6}_z 2_x m_y$, $6_z m_x m_y$, $\bar{3}_z m_y$, $3_z m_y$, $m_x^\star m_y 2_z^\star$, $2_x^\star m_y m_z^\star$, $2_y^\star/m_y$	12	4	12	6
	2_z	E_{2u}	$6_z/m_z m_x m_y$	$6_z/m_z$, 6_z, $m_x^\star m_y^\star 2_z(3)$, $2_x^\star 2_y^\star 2_z(3)$, $2_z/m_z^\star$	12	12	2	6
	2_x ($2_{x'}$, $2_{x''}$)	Reducible	$m_x m_y m_z$	$\bar{6}_z 2_x m_y$, $6_z 2_x 2_y$, $\bar{3}_z m_x$, $3_z 2_x$, $2_x m_y^\star m_z^\star$, $2_x 2_y^\star 2_z^\star$, $2_x/m_x^\star$	12	4	6	6
	2_y ($2_{y'}$, $2_{y''}$)	Reducible	$m_x m_y m_z$	$\bar{6}_z m_x 2_y$, $6_z 2_x 2_y$, $\bar{3}_z m_y$, $3_z 2_y$, $m_x^\star 2_y m_z^\star$, $2_x^\star 2_y 2_z^\star$, $2_y/m_y^\star$	12	4	6	6
	$\bar{1}$	E_{1g}	$6_z/m_z m_x m_y$	$6_z/m_z$, $\bar{3}_z$, $2_z^\star/m_z^\star$, $2_x^\star/m_x^\star(3)$, $2_y^\star/m_y^\star(3)$	12	12	0	12
	1	Reducible	$6_z/m_z m_x m_y$	$\bar{6}_z$, 6_z, $\bar{3}_{z_2}$, 3_z, $m_z^\star$, $m_x^\star(3)$, $m_y^\star(3)$, $2_z^\star$, $2_x^\star(3)$, $2_y^\star(3)$, $\bar{1}^\star$	24	24	24	12
23	3_p (3_q, 3_r, 3_s)	T	3_p	23	4	1	4	4
	$2_x 2_y 2_z$	E	23	23	3	3	0	3
	2_z (2_x, 2_y)	T	$2_x 2_y 2_z$	23, $2_x^\star 2_y^\star 2_z$	6	2	6	6
	1	T	23	$3_p(4)$, $2_z^\star(3)$	12	12	12	12
$\boldsymbol{m\bar{3}}$	23	A_u	$m\bar{3}$	$m^\star\bar{3}^\star$	2	2	0	1
	$\bar{3}_p$ ($\bar{3}_q$, $\bar{3}_r$, $\bar{3}_s$)	T_g	$\bar{3}_p$	$m\bar{3}$	4	1	0	4
	3_p (3_q, 3_r, 3_s)	T_u	$\bar{3}_p$	$m\bar{3}$, 23	8	2	8	4
	$m_x m_y m_z$	E_g	$m\bar{3}$	$m\bar{3}$	3	3	0	3
	$m_x m_y 2_z$ ($2_x m_y m_z$, $m_x 2_y m_z$)	T_u	$m_x m_y m_z$	$m\bar{3}$, $m_x m_y m_z^\star$	6	2	6	3
	$2_x 2_y 2_z$	E_u	$m\bar{3}$	$m\bar{3}$, 23, $m_x^\star m_y^\star m_z^\star$	6	6	0	3
	$2_z/m_z$ ($2_x/m_x$, $2_y/m_y$)	T_g	$m_x m_y m_z$	$m\bar{3}$, $m_x^\star m_y^\star m_z$	6	2	0	6
	m_z (m_x, m_y)	T_u	$m_x m_y m_z$	$m\bar{3}$, $2_x^\star m_y^\star m_z$, $m_x^\star 2_y^\star m_z$, $2_z^\star/m_z$	12	4	12	6
	2_z (2_x, 2_y)	Reducible	$m_x m_y m_z$	$m\bar{3}$, 23, $m_x^\star m_y^\star 2_z$, $2_x^\star 2_y^\star 2_z$, $2_z/m_z^\star$	12	4	6	6
	$\bar{1}$	T_g	$m\bar{3}$	$\bar{3}_p(4)$, $2_z^\star/m_z^\star(3)$	12	12	0	12
	1	T_u	$m\bar{3}$	$\bar{3}_p(4)$, $3_p(4)$, $m_z^\star(3)$, $2_z^\star(3)$, $\bar{1}^\star$	24	24	24	12

Table 3.4.2.7 (*cont.*)

G	F_1	Γ_η	$N_G(F_1)$	$K_G(F_1, g_{1j})$	n	d_F	n_e	n_a
432	23	A_2	432	$4^\star 32^\star$	2	2	0	1
	$3_p 2_{x\bar{y}}$ ($3_q 2_{x\bar{y}}$, $3_r 2_{xy}$, $3_s 2_{xy}$)	T_2	$3_p 2_{x\bar{y}}$	432	4	1	0	4
	3_p (3_q, 3_r, 3_s)	T_1	$3_p 2_{x\bar{y}}$	23, $3_p 2^\star_{x\bar{y}}$	8	2	8	4
	$4_z 2_x 2_{xy}$ ($4_x 2_y 2_{yz}$, $4_y 2_z 2_{xz}$)	E	$4_z 2_x 2_{xy}$	432	3	1	0	3
	4_z (4_x, 4_y)	T_1	$4_z 2_x 2_{xy}$	432, $4_z 2^\star_x 2^\star_{xy}$	6	2	6	3
	$2_x 2_y 2_z$	E	432	23, $4^\star_z 2_x 2^\star_{xy}$	6	6	0	6
	$2_{x\bar{y}} 2_{xy} 2_z$ ($2_{y\bar{z}} 2_{yz} 2_x$, $2_{z\bar{x}} 2_{zx} 2_y$)	T_2	$4_z 2_x 2_{xy}$	432, $4^\star_z 2^\star_x 2_{xy}$	6	2	0	6
	2_z (2_x, 2_y)	Reducible	$4_z 2_x 2_{xy}$	23, $4_y 2_z 2_{xy}$, $4^\star_z$, $2^\star_{x\bar{y}} 2^\star_{xy} 2_z$, $2^\star_x 2^\star_y 2_z$	12	4	6	12
	2_{xy} (2_{yz}, 2_{zx}, $2_{x\bar{y}}$, $2_{y\bar{z}}$, $2_{z\bar{x}}$)	T_1, T_2	$2_{x\bar{y}} 2_{xy} 2_z$	432, $3_r 2_{xy}$, $3_s 2_{xy}$, $4_z 2_x 2_{xy}$, $2_{x\bar{y}} 2^\star_{xy} 2^\star_z$	12	2	12	12
	1	T_1, T_2	432	$3_p(4)$, $4_z(3)$, $2^\star_z(3)$, $2^\star_{xy}(6)$	24	24	24	24
$\bar{4}3m$	23	A_2	$\bar{4}3m$	$\bar{4}^\star 3m^\star$	2	2	0	1
	$3_p m_{x\bar{y}}$ ($3_q m_{x\bar{y}}$, $3_r m_{xy}$, $3_s m_{xy}$)	T_2	$3_p m_{x\bar{y}}$	$\bar{4}3m$	4	1	4	4
	3_p (3_q, 3_r, 3_s)	T_1	$3_p m_{x\bar{y}}$	$\bar{4}3m$, 23, $3_p m^\star_{x\bar{y}}$	8	2	4	4
	$\bar{4}_z 2_x m_{xy}$ ($\bar{4}_x 2_y m_{yz}$, $\bar{4}_y 2_z m_{zx}$)	E	$\bar{4}_z 2_x m_{x\bar{y}}$	$\bar{4}3m$	3	1	0	3
	$\bar{4}_z$ ($\bar{4}_x$, $\bar{4}_y$)	T_1	$\bar{4}_z 2_x m_{x\bar{y}}$	$\bar{4}3m$, $\bar{4}_z 2^\star_x m^\star_{xy}$	6	2	0	3
	$m_{x\bar{y}} m_{xy} 2_z$ ($m_{y\bar{z}} m_{yz} 2_x$, $m_{z\bar{x}} m_{zx} 2_y$)	T_2	$\bar{4}_z 2_x m_{x\bar{y}}$	$\bar{4}3m$, $\bar{4}^\star_z 2^\star_x m_{xy}$	6	2	6	6
	$2_x 2_y 2_z$	E	$\bar{4}3m$	23, $\bar{4}^\star_z 2_x m^\star_{xy}$	6	6	0	6
	m_{xy} (m_{yz}, m_{zx}, $m_{x\bar{y}}$, $m_{y\bar{z}}$, $m_{z\bar{x}}$)	T_1, T_2	$m_{x\bar{y}} m_{xy} 2_z$	$\bar{4}3m$, $3_r m_{xy}$, $3_s m_{xy}$, $\bar{4}_z 2_x m_{xy}$, $m^\star_{x\bar{y}} m_{xy} 2^\star_z$	12	2	12	12
	2_z (2_x, 2_y)	Reducible	$\bar{4}_z 2_x m_{xy}$	23, $\bar{4}^\star_z$, $4^\star_z$, $m^\star_{x\bar{y}} m^\star_{xy} 2_z$, $2^\star_x 2^\star_y 2_z$	12	4	6	12
	1	T_1, T_2	$\bar{4}3m$	$3_p(4)$, $\bar{4}_z(3)$, $m^\star_{xy}(6)$, $2^\star_z(3)$	24	24	24	24
$m\bar{3}m$	$\bar{4}3m$	A_{2u}	$m\bar{3}m$	$m^\star \bar{3}^\star m$	2	2	0	1
	432	A_{1u}	$m\bar{3}m$	$m^\star \bar{3}^\star m^\star$	2	2	0	1
	$m\bar{3}$	A_{2g}	$m\bar{3}m$	$m\bar{3}m^\star$	2	2	0	1
	23	Reducible	$m\bar{3}m$	$\bar{4}^\star 3m^\star$, $4^\star 32^\star$, $m^\star_z \bar{3}_p$	4	4	0	1
	$\bar{3}_p m_{x\bar{y}}$ ($\bar{3}_q m_{x\bar{y}}$, $\bar{3}_r m_{xy}$, $\bar{3}_s m_{xy}$)	T_{2g}	$\bar{3}_p m_{x\bar{y}}$	$m\bar{3}m$	4	1	0	4
	$3_p m_{x\bar{y}}$ ($3_q m_{x\bar{y}}$, $3_r m_{xy}$, $3_s m_{xy}$)	T_{1u}	$\bar{3}_p m_{x\bar{y}}$	$m\bar{3}m$, $\bar{4}3m$, $\bar{3}^\star_p m_{x\bar{y}}$	8	2	8	4
	$3_p 2_{x\bar{y}}$ ($3_q 2_{x\bar{y}}$, $3_r 2_{xy}$, $3_s 2_{xy}$)	T_{2u}	$\bar{3}_p m_{x\bar{y}}$	$m\bar{3}m$, 432, $\bar{3}^\star_p m_{x\bar{y}}$	8	2	0	4
	$\bar{3}_p$ ($\bar{3}_q$, $\bar{3}_r$, $\bar{3}_s$)	T_{1g}	$\bar{3}_p m_{x\bar{y}}$	$m\bar{3}m$, $m\bar{3}$, $\bar{3}_p m^\star_{x\bar{y}}$	8	2	0	4
	3_p (3_q, 3_r, 3_s)	Reducible	$\bar{3}_p m_{x\bar{y}}$	$\bar{4}3m$, 432, $m\bar{3}$, 23, $3_p m^\star_{x\bar{y}}$, $3_p 2^\star_{x\bar{y}}$, $\bar{3}^\star_p$	16	4	8	4
	$4_z/m_z m_x m_{xy}$ ($4_x/m_x m_y m_{yz}$, $4_y/m_y m_z m_{zx}$)	E_g	$4_z/m_z m_x m_{xy}$	$m\bar{3}m$	3	1	0	3
	$\bar{4}_z 2_x m_{xy}$ ($\bar{4}_x 2_y m_{yz}$, $\bar{4}_y 2_z m_{zx}$)	E_u	$4_z/m_z m_x m_{xy}$	$m\bar{3}m$, $\bar{4}3m$, $4^\star_z/m^\star_z m^\star_x m_{xy}$	6	2	0	3
	$\bar{4}_z m_x 2_{xy}$ ($\bar{4}_x m_y 2_{yz}$, $\bar{4}_y m_z 2_{zx}$)	T_{2u}	$4_z/m_z m_x m_{xy}$	$m\bar{3}m$, $4^\star_z/m^\star_z m_x m^\star_{xy}$	6	2	0	3
	$4_z m_x m_{xy}$ ($4_x m_y m_{yz}$, $4_y m_z m_{zx}$)	T_{1u}	$4_z/m_z m_x m_{xy}$	$m\bar{3}m$, $4_z/m^\star_z m_x m_{xy}$	6	2	6	3
	$4_z 2_x 2_{xy}$ ($4_x 2_y 2_{yz}$, $4_y 2_z 2_{zx}$)	E_u	$4_z/m_z m_x m_{xy}$	$m\bar{3}m$, 432, $4_z/m^\star_z m^\star_x m^\star_{xy}$	6	2	0	3
	$4_z/m_z$ ($4_x/m_x$, $4_y/m_y$)	T_{1g}	$4_z/m_z m_x m_{xy}$	$m\bar{3}m$, $4_z/m_z m^\star_x m^\star_{xy}$	6	2	0	3
	$\bar{4}_z$ ($\bar{4}_x$, $\bar{4}_y$)	Reducible	$4_z/m_z m_x m_{xy}$	$m\bar{3}m$, $\bar{4}3m$, $\bar{4}_z 2^\star_x m^\star_{xy}$, $\bar{4}_z m^\star_x 2^\star_{xy}$, $4^\star_z/m^\star_z$	12	4	0	3
	4_z (4_x, 4_y)	Reducible	$4_z/m_z m_x m_{xy}$	$m\bar{3}m$, 432, $4_z m^\star_x m^\star_{xy}$, $4_z 2^\star_x 2^\star_{xy}$, $4_z/m^\star_z$	12	4	6	3
	$m_x m_y m_z$	E_g	$m\bar{3}m$	$m\bar{3}$, $4^\star_z/m_z m_x m^\star_{xy}$	6	6	0	6
	$m_{x\bar{y}} m_{xy} m_z$ ($m_{y\bar{z}} m_{yz} m_x$, $m_{z\bar{x}} m_{zx} m_y$)	T_{2g}	$4_z/m_z m_x m_{xy}$	$m\bar{3}m$, $4^\star_z/m_z m_x m^\star_{xy}$	6	2	0	6
	$m_x m_y 2_z$ ($2_x m_y m_z$, $m_x 2_y m_z$)	Reducible	$4_z/m_z m_x m_{xy}$	$m\bar{3}$, $4_y/m_y m_z m_{zx}$, $\bar{4}^\star_z m_x 2^\star_{xy}$, $4^\star_z m_x m^\star_{xy}$, $m_x m_y m^\star_z$	12	4	6	6
	$m_{x\bar{y}} m_{xy} 2_z$ ($m_{y\bar{z}} m_{yz} 2_x$, $m_{z\bar{x}} m_{zx} 2_y$)	Reducible	$4_z/m_z m_x m_{xy}$	$m\bar{3}m$, $\bar{4}3m$, $\bar{4}^\star_z 2^\star_x m_{xy}$, $4^\star_z m^\star_x m_{xy}$, $m_{x\bar{y}} m_{xy} m^\star_z$	12	4	6	6
	$m_{x\bar{y}} 2_{xy} m_z$ ($m_{y\bar{z}} 2_{yz} m_x$, $m_{z\bar{x}} 2_{zx} m_y$, $2_{x\bar{y}} m_{xy} m_z$, $2_{y\bar{z}} m_{yz} m_x$, $2_{z\bar{x}} m_{zx} m_y$)	T_{1u}, T_{2u}	$m_{x\bar{y}} m_{xy} m_z$	$m\bar{3}m(m_{zx})$, $m\bar{3}m(2_{zx})$, $4_z/m_z m_x m_{xy}$, $m_{x\bar{y}} m^\star_{xy} m_z$	12	2	12	6
	$2_x 2_y 2_z$	E_u	$m\bar{3}m$	$m\bar{3}$, 23, $\bar{4}^\star_z 2_x m^\star_{xy}$, $4^\star_z 2_x 2^\star_{xy}$, $m^\star_x m^\star_y m^\star_z$	12	12	0	6
	$2_{x\bar{y}} 2_{xy} 2_z$ ($2_{y\bar{z}} 2_{yz} 2_x$, $2_{z\bar{x}} 2_{zx} 2_y$)	Reducible	$4_z/m_z m_x m_{xy}$	$m\bar{3}m$, 432, $\bar{4}_z m^\star_x 2_{xy}$, $4^\star_z 2^\star_x 2_{xy}$, $m^\star_{x\bar{y}} m^\star_{xy} m^\star_z$	12	4	0	6
	$2_z/m_z$ ($2_x/m_x$, $2_y/m_y$)	Reducible	$4_z/m_z m_x m_{x\bar{y}}$	$m\bar{3}$, $4_y/m_y m_z m_{zx}$, $4^\star_z/m_z$, $m^\star_x m^\star_y m_z$, $m^\star_{x\bar{y}} m^\star_{xy} m_z$	12	4	0	12
	$2_{xy}/m_{xy}$ ($2_{yz}/m_{yz}$, $2_{zx}/m_{zx}$, $2_{x\bar{y}}/m_{x\bar{y}}$, $2_{y\bar{z}}/m_{y\bar{z}}$, $2_{z\bar{x}}/m_{z\bar{x}}$)	T_{1g}, T_{2g}	$m_{x\bar{y}} m_{xy} m_z$	$m\bar{3}m$, $\bar{3}_r m_{xy}(2)$, $4_z/m_z m_x m_{xy}$, $m^\star_{x\bar{y}} m_{xy} m^\star_z$	12	2	0	12
	m_z (m_x, m_y)	T_{1u}, T_{2u}	$4_z/m_z m_x m_{x\bar{y}}$	$m\bar{3}$, $\bar{4}_x m_z 2_{yz}$, $4_y m_z m_{zx}$, $4_z/m_z$, $2^\star_x m^\star_y m_z(2)$, $m^\star_{x\bar{y}} 2^\star_{xy} m_z(2)$, $2^\star_z/m_z$	24	8	24	12
	m_{xy} (m_{yz}, m_{zx}, $m_{x\bar{y}}$, $m_{y\bar{z}}$, $m_{z\bar{x}}$)	T_{1u}	$m_{x\bar{y}} m_{xy} m_z$	$m\bar{3}m$, $\bar{4}3m$, $4_z 2_x m_{xy}$, $4_z m_x m_{xy}$, $\bar{3}_r m_{xy}$, $\bar{3}_s m_{xy}$, $3_r m_{xy}$, $3_s m_{xy}$, $m^\star_{x\bar{y}} m_{xy} 2^\star_z$, $2^\star_{xy}/m_{xy}$	24	4	24	12
	2_z (2_x, 2_y)	Reducible	$4_z/m_z m_x m_{x\bar{y}}$	$m\bar{3}$, 23, $4_y 2_z m_{zx}$, $4_y 2_z 2_{zx}$, $4^\star_z$, $4^\star_z$, $m^\star_x m^\star_y 2_z$, $m^\star_{x\bar{y}} m^\star_{xy} 2_z$, $2^\star_x 2^\star_y 2_z$, $2^\star_{x\bar{y}} 2^\star_{xy} 2_z$, $2_z/m^\star_z$	24	8	6	12
	2_{xy} (2_{yz}, 2_{zx}, $2_{x\bar{y}}$, $2_{y\bar{z}}$, $2_{z\bar{x}}$)	T_{2u}	$m_{x\bar{y}} m_{xy} m_z$	$m\bar{3}m$, 432, $\bar{3}_r m_{xy}$, $\bar{3}_s m_{xy}$, $3_r 2_{xy}$, $3_s 2_{xy}$, $\bar{4}_z m_x 2_{xy}$, $4_z 2_x 2_{xy}$, $m^\star_{x\bar{y}} 2_{xy} m^\star_z$, $2^\star_{x\bar{y}} 2_{xy} 2^\star_z$, $2_{xy}/m^\star_{xy}$	24	4	12	12
	$\bar{1}$	T_{1g}, T_{2g}	$m\bar{3}m$	$\bar{3}_p(4)$, $4_z/m_z(3)$, $2^\star_z/m^\star_z(3)$, $2^\star_{xy}/m^\star_{xy}(6)$	24	24	0	24
	1	T_{1u}, T_{2u}	$m\bar{3}m$	$\bar{3}_p(4)$, $\bar{4}_z(3)$, $4_z(3)$, $m^\star_z(3)$, $m^\star_{xy}(6)$, $2^\star_z(3)$, $2^\star_{xy}(6)$, $1^\star$	48	48	48	24

references